California Environmental Protection Agency
Department of Toxic Substances Control

HAZARDOUS WASTE FACILITY POST-CLOSURE PERMIT

Facility Name:

The Boeing Company
Rocketdyne Propulsion and Power
Santa Susana Field Laboratory
Areas I and III
Simi Hills, Ventura County, CA 93065

Owner Name:

The Boeing Company
Rocketdyne Propulsion and Power
Santa Susana Field Laboratory
Simi Hills, Ventura County, California

Operator Name:

The Boeing Company
Rocketdyne Propulsion and Power
Santa Susana Field Laboratory
Simi Hills, Ventura County, California

Permit Number:	PC-94/95-3-02
Facility EPA ID Number:	CAD 093 365 435
Effective Date of Permit:	May 11, 1995
Expiration Date of Permit:	May 11, 2005
Date Modified:	November 19, 2004
Modification Number:	MOD SC3-111904-A

Pursuant to Section 66270.42, Title 22, Division 4.5, California Code of Regulations, the Hazardous Waste Facility Permit issued April 7, 1995, effective May 11, 1995, is hereby modified to address changes to the groundwater monitoring program of the five closed RCRA surface impoundments and to updated the Groundwater Sampling and Analysis Plan. Revised pages are labeled "Revised November 19, 2004" and are hereby incorporated into the approved Permit, replacing the original pages. The revised permit consists of 83 pages (Attachment A) plus Attachments B through J.

//original signed by//

Jose Kou, P.E., Chief
Southern California Permitting and Corrective Action Branch
Department of Toxic Substances Control

Date: 11/19/04

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ATTACHMENTS

ATTACHMENT A

PERMIT CONDITIONS

HAZARDOUS WASTE FACILITY POST-CLOSURE PERMIT

The Boeing Company
Rocketdyne Propulsion and Power
Santa Susana Field Laboratory, Areas I and III

Permit Number: PC-94/95-3-02
Modification Number: MOD SC3-111904-A
EPA I.D. Number: CAD093365435

PART I

DESCRIPTION OF FACILITY

A. OWNER, OPERATIONS, AND LOCATION

In 1995, Rockwell International Corporation, Rocketdyne Division was the Facility Owner and Operator of Areas I and III of the Santa Susana Field Laboratory in Simi Hills, California. Rockwell-Rocketdyne applied to the California Department of Toxic Substance Control (Department) for a hazardous waste facility post-closure permit to operate hazardous waste groundwater extraction, treatment and monitoring systems at the Rockwell-Rocketdyne Site (Facility) as well as maintenance of caps at closed impoundments. After issuance of the post-closure permit in 1995, Rockwell International Corporation, Rocketdyne Division was purchased by The Boeing Company to become a wholly owned subsidiary renamed as Boeing North American. As of January 1, 2000, the name of this Permit was updated to The Boeing Company, Rocketdyne Propulsion and Power. Documents may still refer to the Owner and/or Operator of this permit as Rockwell International Corporation, Rocketdyne Division, Boeing North American Inc., The Boeing Company, or Rocketdyne Propulsion & Power.

The Facility is located in the Simi Hills in Ventura County, California. The Simi Hills are bordered on the east by the San Fernando Valley and to the north by the Simi Valley. The site is located about 8 miles south of the San Fernando Valley Freeway (Hwy-118) and about 10 miles north of the Ventura Freeway (US-101) (Figure 1).

1. Facility Site History/Ownership

The Santa Susana Field Laboratory (SSFL) was established in 1947 and is located in eastern Ventura County. The site is located on the western edge of the San Fernando Valley, south of Simi Valley, and near the communities of Santa Susana Knolls, Bell Canyon, and Lakeside Park. As of the year 2000, SSFL comprises approximately 2850 acres and is divided into four administrative areas -- Area I, Area II, Area III, and Area IV -- and two buffer zone. The Boeing-Rocketdyne facility includes Areas I and III totaling 791 acres, plus a contiguous buffer zone of 1143 acres to the south and a contiguous buffer zone of 182 acres to the north. This facility is owned and operated by The Boeing Company, Rocketdyne Propulsion and Power. Area II, consisting of 404 acres along with 42 acres in Area I, is owned by NASA and operated by Boeing-Rocketdyne. Area IV is owned by Boeing-Rocketdyne and consists of 290 acres. The Department of Energy owns facilities on a 90-acre site within Area IV. This 90 acres are undergoing restoration and consist mainly of facilities/structures built and owned by the Department of Energy and operated by Rocketdyne.

In the early 1980s, trichloroethylene (TCE) was identified in the groundwater at the site during an investigation of the on site water supply wells. As a result of this discovery, numerous investigations have been conducted to assess the presence of volatile organic compounds (VOCs) in groundwater beneath the site. As a result of the September 1990 Groundwater Monitoring Evaluation (CME) conducted by the Department, Rocketdyne is currently implementing a Department-approved Site Characterization program. The Site Characterization program is intended to provide a better understanding of the complex fracture-dominated groundwater system at SSFL. About 200 monitoring wells have been constructed to assess groundwater contamination.

In the mid-1980s, the respective owners and/or operators discontinued the use of nine surface impoundments (SIs) in Areas I, II, and III of SSFL. The surface impoundments had been used for containment purposes for the activities related to the testing of rocket engines and engine components. The impoundments received rinse water that may have contained traces of fuels, oxidizers, or solvents.

The impoundments have been undergoing the formal RCRA closure process since 1985.

The respective owner and/or operators are required to conduct post-closure care because the nine surface impoundments could not be clean-closed due to groundwater contamination. There are five SIs in Areas I and III, and four SIs in Area II. The five SIs in Areas I and III area covered by this permit. The four SIs in Area II are covered in a separate permit.

Soil site characterization is provided in the "Interim Final RCRA Facility Assessment Report for Rockwell International Corporation, Rocketdyne Division," dated July 10, 1991 and the Current Conditions Report and Draft RCRA Facility Investigation Workplan Areas I and III, SSFL, Parts 1 and 2 dated October 1993.

The Owner and/or Operator has performed several remediation activities related to the SIs including closure, soil remediation, and groundwater extraction and treatment. Additional ongoing site investigation includes characterization of the nature and extent of chemicals in the groundwater and soil at the site.

The five RCRA surface impoundments in Areas I and III (see Figure 2) for which this Post-Closure Permit has been issued includes:

a. Advanced Propulsion Test Facility 1, (APTF-1)

b. Advanced Propulsion Test Facility 2, (APTF-2)

c. Systems Test Laboratory-IV 1, (STL-IV-1)

d. Systems Test Laboratory-IV 2, (STL-IV-2)

e. Engineering Chemistry Laboratory Pond, (ECL)

The four RCRA surface impoundments in Area II that are addressed under a separate permit are Alfa Bravo Skim Pond (ABSP), Storable Propellants Area Pond 1 (SPA-1), Storable Propellants Area Pond 2 (SPA-2) and Delta Area Pond (Delta).

Scope: Conditions of this Permit apply to the maintenance of the surface impoundments' caps, groundwater extraction, monitoring and treatment systems described herein, and any hazardous wastes associated with these activities. Specific requirements addressing releases from solid waste management units are in Section VII of this Permit.

2. Extraction and Monitoring Wells

The Post-Closure Permit for Areas I and III describes the post-closure care for five closed surface impoundments and the operation of five groundwater treatment systems.

The five groundwater treatment systems draw from a total of 23 extraction wells plus a french drain/sump located in Area III ECL.

The groundwater monitoring program for the five closed surface impoundments include 25 monitoring wells including background wells, point-of-compliance wells, detection monitoring program wells and evaluation monitoring program wells. (NOTE: some wells serve more than one function). Under the conditions of this post closure permit for Areas I and III, Boeing will monitor 6 background wells, 6 point of compliance wells, 9 detection monitoring wells, and 20 evaluation monitoring points

In addition, a total of 258 on-site wells, off-site wells and springs are monitored throughout SSFL to assess groundwater conditions under the terms of a Corrective Action Order dated November 12, 1992.

3. Interim Measure Groundwater Remediation System

Groundwater is extracted and treated using both air stripping and UV/peroxide treatment systems. A brief description is provided in the following section and a detailed description of both systems is in the "Groundwater Remediation Operation Plan" submitted by Rocketdyne and incorporated in this Permit by reference.

Water from the extraction wells is pumped to either a flow equalization tank or directly to the air stripping towers. Untreated water is pumped from the flow equalization tank and passed through an air stripping unit or the UV/peroxide treatment unit, from which treated groundwater meeting discharge requirements is either pumped directly into the SSFL water distribution pipeline or discharged to one of the site reclaimed water system ponds.

Exhaust from the air stripping towers is directed through vapor phase granular activated carbon canisters and the treated air is released to the atmosphere meeting air discharge regulation. The treated air discharge is regulated by the Ventura County Air Pollution Control District.

The ultraviolet light/peroxidation (UV/peroxide) treatment process uses high intensity ultraviolet lamps in combination with an oxidation process which facilitates the rapid breakdown of the organic molecules present in the process groundwater. When the UV/peroxide treatment is completed, hydrocarbons are converted to water and non-hazardous constituents. There are no air emissions nor waste by-products from the UV/peroxide treatment.

In 1985, the Owner and/or Operator operated five groundwater treatment systems in Areas I and III. These systems extracted groundwater from 24 extraction wells using submersible pumps.

In October 1998, Boeing deactivated the Canyon Air Stripping facility and rerouted the extracted groundwater to the Area 1 Road Air Stripping System as part of a "30-Day Pilot Test" to verify the capacity of the Area 1 Road System. The 30-Day Test was conducted from October 27 through November 23, 1998. A report on the 30-Day Test is dated December 23, 1998. After completing the test, the Canyon facility remained inactive and the extracted groundwater continued to the Area I Road Air Stripping System. A Class 2 Permit Modification was performed in November 2001 which placed

both the Canyon Air Stripping facility and Area I Road Air Stripping facility on standby status. The extracted groundwater from both systems were rerouted to the WS-5 UV/Peroxidation System. The one extraction well from the Canyon System (RD-1) and the seven extraction wells from the Area 1 Road System (ES-1, ES-3, ES-4, ES-5, ES-6, ES-7, RD-2) were combined with the four extraction wells to the WS-5 System (ES-11, HAR-4, HAR-16, WS-5) for a total of twelve extraction wells feeding into the WS-5 System. As conditions are reevaluated, the Canyon Air Stripping System and the Area 1 Road Air Stripping System may be reactivated and the extraction wells routed back to their respective system.

The Areas I and III Post-Closure Permit includes the operation of extraction wells, monitoring wells and five permitted groundwater treatment systems (see Figure 2). The groundwater treatment systems are described below and detailed in the Area I & III Groundwater Remediation Operation Plan. System volumes and capacity are summarized in Table 7 of this Permit (Attachment A, Part VI).

Groundwater Treatment Facilities in Areas I and III:

Name	**Location**
Alfa AST	Area I - Alfa
Area 1 Road AST	Area I - Bowl
Canyon AST	Area I - Canyon Road
STL-IV AST	Area III - STL-IV
WS-5 (UV Peroxide)	Area I - Bowl
ECL Collection Unit	Area III

ALFA AIR STRIPPING SYSTEM (WS-6):
The Alfa Air Stripping system is located on the far western section of Area I, mid-length along the boundary between Area I and Area II.. One extraction well feeds into the Alfa system -- WS-6. The Alfa system treats the extracted groundwater with two air stripping towers in series. The Alfa system has an operating capacity of 175 gpm. The tower exhaust goes through activated carbon before releasing into the atmosphere. The treated groundwater effluent is discharged to a surface channel which flows through Area II and into Area III to the Silvernale onsite retention pond. Releases from Silvernale pass through Outfall 002, a NPDES Permit monitoring point, before continuing offsite down the Bell Canyon drainage.

AREA 1 ROAD AIR STRIPPING SYSTEM (ES-1, ES-3, ES-4, ES-5, ES-6, ES-7, RD-2):
The Area 1 Road Air Stripping system is located near the center of Area I and southwest of the WS-5 system. Seven extraction wells feed into the Area 1 Road system -- ES-1, ES-3, ES-4, ES-5, ES-6, ES-7 and RD-2. In 1994, wells ES-11, HAR-4 and HAR-16 were rerouted from the Area 1 Road Air Stripping system to the WS-5 UV/Peroxidation system. The Area 1 Road system treats the extracted groundwater with two air stripping towers in series. The Area I Road system has an operating capacity of 35 gpm. The tower exhausts goes through activated carbon before releasing into the atmosphere. The treated groundwater effluent is discharged to a surface channel which flows to the R-1 Pond (onsite retention pond). Releases from the R-1 Pond pass through Outfall 001, a NPDES Permit monitoring point, before continuing offsite down the Bell Canyon drainage.

In October 1998, Boeing deactivated the Canyon Air Stripping facility and rerouted the extracted groundwater to the Area 1 Road Air Stripping System as part of a "30-Day Pilot Test" to verify the capacity of the Area 1 Road System. After completing the test, the Canyon facility remained inactive and the extracted groundwater continued to the Area I Road Air Stripping System. A Class 2 Permit Modification was performed in November 2001 which placed both the Canyon Air Stripping facility and Area I Road Air Stripping facility on standby status. The extracted groundwater from both systems were rerouted to the WS-5 UV/Peroxidation System. The one extraction well from the Canyon System (RD-1) and the seven extraction wells from the Area 1 Road System (ES-1, ES-3, ES-4, ES-5, ES-6, ES-7, RD-2) were combined with the four extraction wells to the WS-5 System (ES-11, HAR-4, HAR-16, WS-5) for a total of twelve extraction wells feeding into the WS-5 System. As conditions are reevaluated, the Canyon Air Stripping System and the Area 1 Road Air Stripping System may be reactivated and the extraction wells routed back to their respective system.

CANYON AIR STRIPPING SYSTEM (RD-1):
The Canyon Air Stripping system is located near the center of Area I and east of the WS-5 system. One extraction well feeds into the Canyon system -- RD-1. The Canyon system treats the extracted groundwater with two air stripping towers in series. The Canyon system has an operating capacity of 35 gpm. The tower exhaust goes through activated carbon before releasing into the atmosphere. The treated groundwater effluent is discharged to a surface channel which flows to the R-1 Pond (onsite retention pond). Releases from the R-1 Pond pass through Outfall 001, a NPDES Permit monitoring point, before continuing offsite down the Bell Canyon drainage.

In October 1998, Boeing deactivated the Canyon Air Stripping facility and rerouted the extracted groundwater to the Area 1 Road Air Stripping System as part of a "30-Day Pilot Test" to verify the capacity of the Area 1 Road System. After completing the test, the Canyon facility remained inactive and the extracted groundwater continued to the Area I Road Air Stripping System. A Class 2 Permit Modification was performed in November 2001 which placed both the Canyon Air Stripping facility and Area I Road Air Stripping facility on standby status. The extracted groundwater from both systems were rerouted to the WS-5 UV/Peroxidation System. The one extraction well from the Canyon System (RD-1) and the seven extraction wells from the Area 1 Road System (ES-1, ES-3, ES-4, ES-5, ES-6, ES-7, RD-2) were combined with the four extraction wells to the WS-5 System (ES-11, HAR-4, HAR-16, WS-5) for a total of twelve extraction wells feeding into the WS-5 System. As conditions are reevaluated, the Canyon Air Stripping System and the Area 1 Road Air Stripping System may be reactivated and the extraction wells routed back to their respective system.

STL-IV AIR STRIPPING SYSTEM (ES-14, ES-17, ES-23, ES-24, ES-26, ES-27, ES-30, ES-32, HAR-17, HAR-18, ECL French Drain, ECL Sump):
The STL-IV Air Stripping system is located in the southern portion of Area III. Ten extraction wells feed into STL-IV -- ES-14, ES-17, ES-23, ES-24, ES-26, ES-27, ES-30, ES-32, HAR-17, and HAR-18. In addition, drainage from the ECL Collection System (ECL French Drain and ECL Sump) also contribute to the STL-IV system. The Canyon system treats the extracted groundwater with two air stripping towers in series. The STL-IV system has an operating capacity of 35 gpm. The tower exhaust goes through activated carbon before

releasing into the atmosphere. The treated groundwater effluent is discharged to a surface channel which flows into Area II and into the R-2 Pond (onsite retention pond). Releases from the R-2 Pond pass through Outfall 002, a NPDES Permit monitoring point, before continuing offsite down the Bell Canyon drainage.

WS-5 UV/PEROXIDATION (ES-11, HAR-4, HAR-16, WS-5):
The WS-5 UV/Peroxidation system is located near the center of Area I, west of the Canyon system and northeast of the Area 1 Road system. Four extraction wells feed into the WS-5 system -- ES-11, HAR-4, HAR-16 and WS-5. Extraction wells ES-11, HAR-4 and HAR-16 were formerly connected to the Area 1 Road system and rerouted to the WS-5 system in 1994. Groundwater is treated at WS-5 using a combination of ultraviolet light (UV) and hydrogen peroxide (H_2O_2). The WS-5 systems has an operating capacity of 450 gallons per minute (gpm). The treated groundwater effluent is discharged to a surface channel which flows to the R-1 Pond (onsite retention pond). Releases from the R-1 Pond pass through Outfall 001, a NPDES Permit monitoring point, before continuing offsite down the Bell Canyon drainage.

In October 1998, Boeing deactivated the Canyon Air Stripping facility and rerouted the extracted groundwater to the Area 1 Road Air Stripping System as part of a "30-Day Pilot Test" to verify the capacity of the Area 1 Road System. After completing the test, the Canyon facility remained inactive and the extracted groundwater continued to the Area I Road Air Stripping System. A Class 2 Permit Modification was performed in November 2001 which placed both the Canyon Air Stripping facility and Area I Road Air Stripping facility on standby status. The extracted groundwater from both systems were rerouted to the WS-5 UV/Peroxidation System. The one extraction well from the Canyon System (RD-1) and the seven extraction wells from the Area 1 Road System (ES-1, ES-3, ES-4, ES-5, ES-6, ES-7, RD-2) were combined with the four extraction wells to the WS-5 System (ES-11, HAR-4, HAR-16, WS-5) for a total of twelve extraction wells feeding into the WS-5 System. As conditions are reevaluated, the Canyon Air Stripping System and the Area 1 Road Air Stripping System may be reactivated and the extraction wells routed back to their respective system.

The total groundwater volume treated through the eight treatment systems in Areas I, II, and III, between 1987 and March 1994, is approximately 705.5 million gallons. During 1993, the total treatment capacity of the eight operational treatment systems at the Facility was approximately 950 gallons per minute (gpm). Each extraction/treatment system withdraws contaminated groundwater from one or more nearby pumping wells. The treatment capacity in terms of groundwater pumpage, and the classification of pumping and observation wells for each constructed extraction/treatment system, are presented in Table C-1 of the Annual Groundwater Monitoring Report, Santa Susana Field Laboratory, 1993 and dated February 23, 1994.

4. Soil Remediation

In 1985 Rockwell-Rocketdyne submitted a closure plan for five surface impoundments in Areas I and III to the Department for review and approval. The Department approved the closure plan with modifications on September 1988. The closure plan included soil sampling and closure related activities.

A workplan for additional verification sampling of soils at the former surface impoundments was approved by the Department and was implemented in 1993.

Further investigation of residual soil contamination due to Boeing-Rocketdyne's solid waste management units (SWMUs) is being addressed in a separate and concurrent Corrective Action Program (see Attachment A, Part VII of this Permit).

As part of the Corrective Action process, the Department has reviewed a RCRA Facility Investigation (RFI) Workplan prepared by Rockwell-Rocketdyne's consultant. The RFI Workplan is intended to characterize the magnitude of soil contamination problems from SWMUs (including regulated surface impoundments) at the SSFL. After contaminated areas are characterized, Boeing-Rocketdyne must perform a Corrective Measures Study to examine the feasibility of alternative cleanup approaches at contaminated areas.

Based on the Corrective Measures Study, the Department will select appropriate Corrective Measures for implementation. A permit modification to add the requirement to perform the selected Corrective Measures will be proposed and will be subject to public review and comment and to CEQA.

The Department has reviewed the Groundwater Remediation Operations Plan, Rocketdyne Site Area I and III - Santa Susana Field Laboratory, Revision 1, June 25, 1991 (text and figure volumes) and the Revised Areas I and III Surface Impoundment Post-Closure Plan, Santa Susana Field Laboratory, submitted in January 1993.

This permit authorizes the following:

- Continued operation of the groundwater extraction and monitoring systems
- Corrective action for identified releases of hazardous waste or hazardous constituents from solid waste management units.
- Further characterization of groundwater contamination.
- Monitoring and evaluation of effectiveness of the groundwater cleanup measures and modification of present remediation measures, if necessary.
- Maintenance of five surface impoundments caps and surface water diversion structures.

B. COMPLIANCE WITH CALIFORNIA ENVIRONMENTAL QUALITY ACT (CEQA)

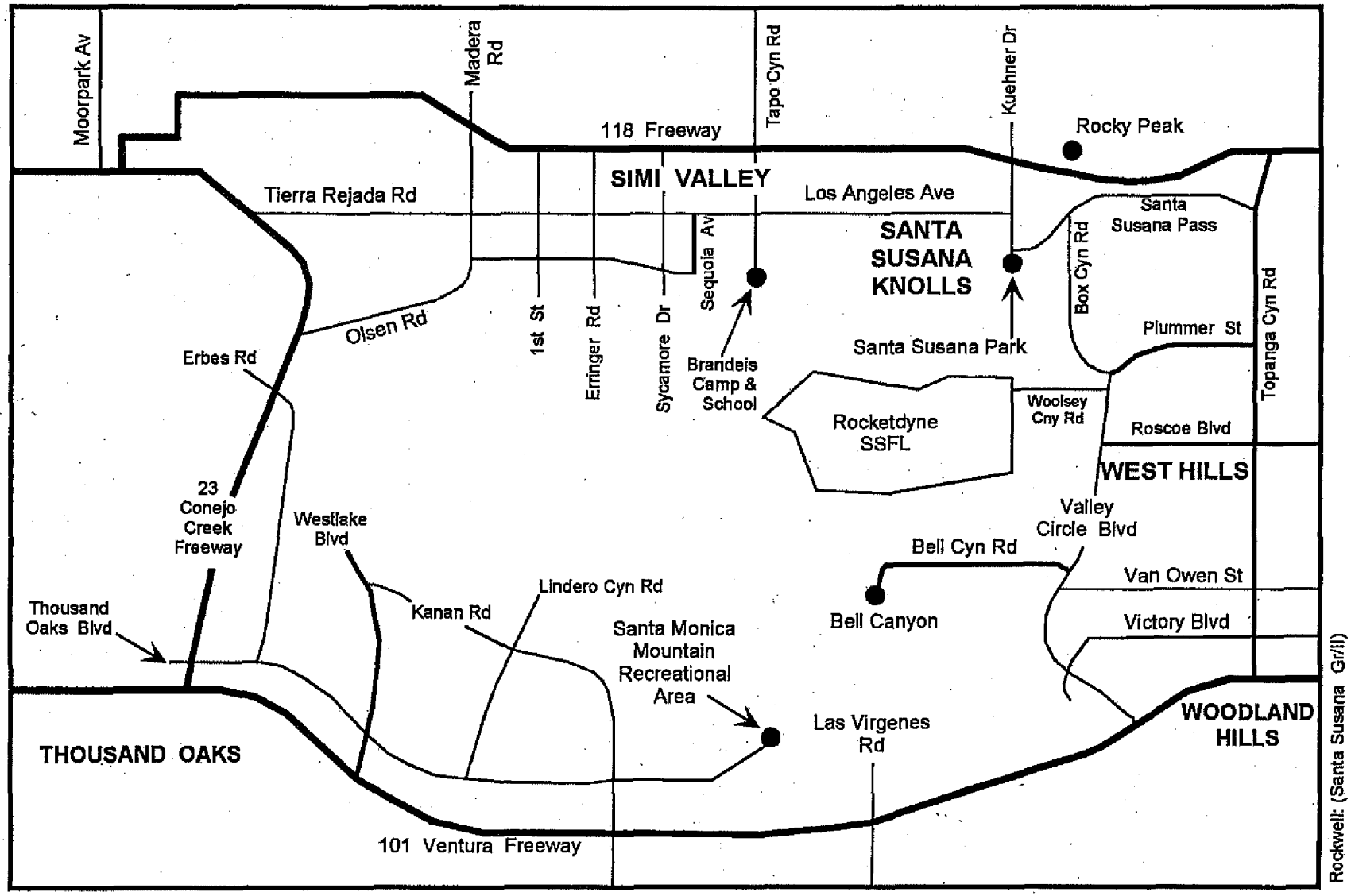
The Department has prepared a negative declaration in accordance with the California Environmental Quality Act (Public Resources Code, Section 21000, et. seq.) and the State guidelines. The Department has determined that this particular project will not have a significant deleterious effect on the environment. The negative declaration was adopted on April 7, 1995.

C. PERMIT MODIFICATION HISTORY

Modification to this Permit or the Operations Plan identified in Part II.N.1 of this Permit are allowed as per 22 CCR Sections 66270.41 or 66271.42. All modifications made to this Permit and/or Operation Plan are listed and described in Attachment J to this Permit.

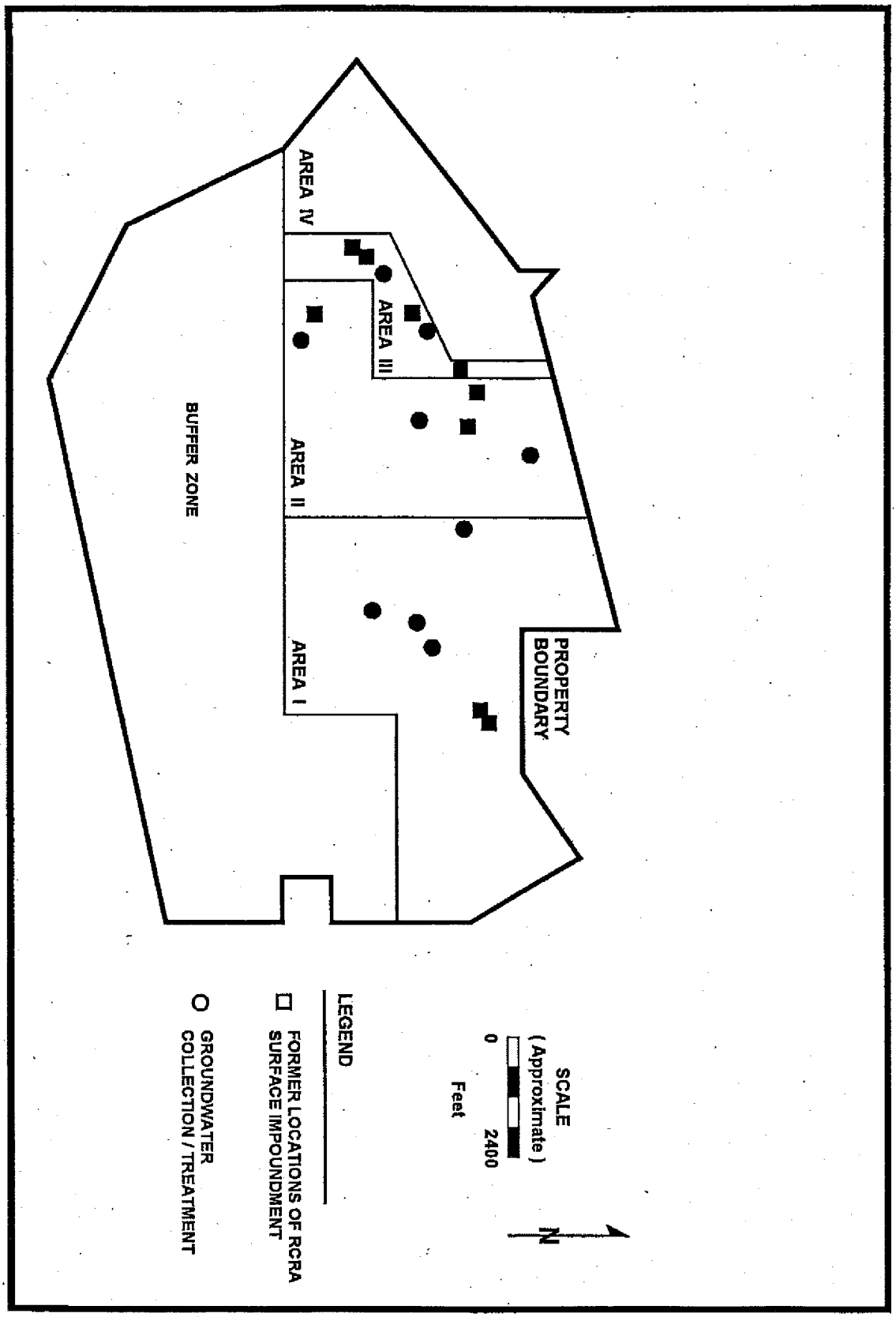
ROCKWELL INTERNATIONAL CORPORATION
ROCKETDYNE DIVISION
SANTA SUSANA FIELD LABORATORY

NOTE: MAP NOT TO SCALE



Rockwell: (Santa Susana Gr/II)

Figure 1



Rockwell (Santa Susana Groundw)

Figure 2

PART II

CONDITIONS APPLICABLE TO ALL PERMITS

A. REFERENCES AND TERMINOLOGY

1. Division 4.5, Environmental Health Standards for the Management of Hazardous Waste of Title 22, California Code of Regulations (CCR) is referred to as "Title 22" in this Permit. Each section in "Title 22" is cited as 22 CCR [section number].

2. Chapters 6.5 through 6.98 of Division 20 of the California Health and Safety Code are referred to as the "Health and Safety Code" in this Permit.

3. For purposes of this Permit, terms used herein shall have the same meaning as those in the "Health and Safety Code" or "Title 22" unless this permit specifically provides otherwise. Where terms are not defined in the statutes, the regulations, or this Permit, such terms shall be defined by a standard dictionary reference or the generally accepted scientific or industrial meaning of the term.

B. EFFECT OF PERMIT

1. The Owner and/or Operator shall comply with the provisions of the "Health and Safety Code" (H&SC) and "Title 22," unless otherwise specially provided in this Permit. The issuance of this Permit by the Department does not release the Owner and/or Operator from any liability or duty imposed by federal or state statutes and regulations or local ordinances, except the obligation to obtain this Permit. In particular, the Owner and/or Operator shall obtain the required permits issued by other governmental agencies, at the federal, state and local levels under the applicable land use planning, zoning, hazardous waste, air quality, water quality, and solid waste management laws for the construction and operation of the Facility. If there is overlap, the most protective and/or stringent requirement, as determined by the Department, shall apply.

2. Issuance of this Permit by the Department does not prevent the Department from adopting or amending regulations, issuing administrative orders, or obtaining judicial orders which impose requirements which are in addition to, or more stringent than, those in existence at the time this Permit was issued, and does not prevent the enforcement of these requirements against the Owner and/or Operator of the Facility. The Owner and/or Operator shall comply with any such additional or more stringent requirements in addition to the requirements and conditions specified in the permit.

3. Issuance of this Permit does not convey property rights or any sort of exclusive privilege, nor does it authorize any injury to persons or property or any invasion of other private rights.

4. The Owner and/or Operator are permitted to operate the groundwater extraction, treatment and monitoring systems in accordance with the conditions of this Permit. The Owner and/or Operator shall perform the hazardous waste management activity authorized by this Permit in accordance with plans and specifications approved by the Department. The Owner and/or Operator shall not conduct any hazardous waste management activities prohibited by this Permit. Any other hazardous waste management activities not addressed in this Permit are prohibited, unless otherwise specifically provided in the California Hazardous Waste Control Law ("Health and Safety Code") and regulations adopted thereunder.

C. REQUIREMENT TO SUBMIT INFORMATION

Unless otherwise specifically stated elsewhere in this Permit, the "Health and Safety Code," or the "Title 22", the Owner and/or Operator shall furnish to the Department, within a reasonable time, not to exceed 30 days unless a time extension is approved by the Department, any relevant information which the Department may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this Permit, or to determine compliance with this Permit. A copy of any information, report, submittal or notice required by this Permit shall be submitted to:

Department of Toxic Substances Control
Attn: Chief, Southern California Permitting Branch
1011 North Grandview Avenue
Glendale, California 91201

D. CONSENT TO ENTRY BY DEPARTMENT REPRESENTATIVES

The Owner and/or Operator, by accepting this Permit, consent to entry, consistent with SSFL security requirements, by any authorized representative with appropriate identification from the Department, the State Water Resources Control Board, the Regional Water Quality Control Board, or the local health officer at any reasonable hour of the day in order to carry out the purposes of the Hazardous Waste Control Law (Health and Safety Code Section 25100 et. seq.) including but not limited to the activities listed in 22 CCR 66270.30(i).

The Department reserves the right to challenge the permittee's assertion of the need for security or to seek legal relief for any denial of access to the Facility.

E. STANDARD CONDITIONS

1. The Owner and/or Operator shall maintain and demonstrate to the Department the required financial assurances in accordance with the provisions of 22 CCR 66264.140 through 66264.148, 66264.197, 66264.552 and 66270.40(b)

2. The Owner and/or Operator shall comply with 22 CCR 66264.197, 66264.552 and 66270.40(b).

3. The Owner and/or Operator shall comply with the general Facility standards contained in Title 22, Chapter 14, Article 2.

4. The Owner and/or Operator shall comply with preparedness and prevention requirements contained in Title 22, Chapter 14, Article 3.

5. The Owner and/or Operator shall comply with the contingency plan and emergency procedures requirements contained in Title 22, Chapter 14, Article 4.

6. The Owner and/or Operator shall comply with the manifest system, recordkeeping and reporting requirements contained in Title 22, Article 5, Chapter 14, and Section 66270.30(l)(1)-(9).

7. The Owner and/or Operator shall comply with the closure and post-closure requirements, if applicable, contained in Title 22, Chapter 14, Article 7.

F. LAND DISPOSAL RESTRICTIONS

1. The Owner and/or Operator shall comply with applicable provisions of the land disposal restrictions as found in Title 22, Division 4.5, Chapter 18.

2. The Owner and/or Operator shall retain on-site, until completion of post-closure of the Facility, a copy of all notices, certifications, demonstrations, waste analyses data, and other documentation related to the management of all wastes (for on-site or off-site treatment, storage or disposal) subject to land disposal restrictions.

3. The Owner and/or Operator shall retain on-site a waste analysis plan describing how and when wastes or treatment residues will be tested to comply with the land disposal restriction regulations.

G. PERMIT ACTIONS

This Permit may be modified, revoked and reissued, or terminated for cause. The filing of a request by the Owner and/or Operator for a permit modification, revocation and reissuance, or termination or a notification of anticipated noncompliance or planned changes (except as provided in 22 CCR 66270.42), does not stay any permit condition. Except as provided in 22 CCR 66270.42, a new facility permit condition shall become effective on the date specified in the Department's written notice of approval of the permit modification, pursuant to 22 CCR 66270.42 and/or 66271.14.

H. NEED TO HALT OR REDUCE ACTIVITY

It shall not be a defense for the Owner and/or Operator in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this Permit.

I. SEVERABILITY

The provisions of this Permit are severable, and if any provision of this Permit, or the application of any provision of this Permit to any circumstance is held invalid, the application of such provision to other circumstances and the remainder of this Permit shall not be affected thereby. [22 CCR 66271.15(a)]

J. PERMIT EXPIRATION

In accordance with 22 CCR 66270.51, this Permit and all conditions therein will remain in effect beyond the permit expiration or termination date, until the effective date of a new permit, if the Owner and/or Operator has submitted a timely, complete application (both Part A and Part B) for a new permit and, through no fault of the Owner and/or Operator, the Department has not issued a new permit. In accordance with 22 CCR 66270.10(h), a timely and complete application for a new permit must be submitted at least one-hundred and eighty (180) calendar days before this Permit expires, unless permission for a later date is granted in writing by the Department.

K. 24-HOUR REPORTING

The Owner and/or Operator shall orally report to the California Office of Emergency Services at (800) 852-7550 and the Department any incidents of noncompliance, with the conditions of this Permit and any of the provisions of Title 22 or Health and Safety Code, which may endanger health or the environment within twenty-four (24) hours after becoming aware of such circumstances. The report shall include the information as required in 22 CCR 66270.30(l)(6) (A) and (B).

L. NOTICE OF PLANNED PHYSICAL CHANGES

The Owner and/or Operator shall give notice to the Department as soon as possible, and at least thirty (30) calendar days in advance, of any planned physical alterations or additions to the permitted Facility.

M. OPERATIONS AT NIGHT

When the Facility is operated during hours of darkness, the Owner and/or Operator shall provide sufficient lighting to ensure safe, effective management of hazardous wastes.

N. PART B PERMIT APPLICATION (OPERATION PLAN)

1. By the issuance of this Permit, the Part B Permit Application, consisting of the documents titled "Groundwater Remediation Operation Plan, Rocketdyne Site (Areas I and III), Santa Susana Field Laboratory, Revision 3, October 11, 2000," "Revised Area I and III, Surface Impoundment Post Closure Plan, Santa Susana Field Laboratory," dated January, 1993 and subsequent revisions and additions (as per Rocketdyne's letters to the Department dated 14 October 1992, 3 September 1993, and 13 and 16 December 1993, and the Department's letter to Rocketdyne dated 10 September 1993) is hereby approved. This Part B Permit Application and any subsequent revisions and additions thereto, are subject to the permit modification requirements contained in 22 CCR 66270.41 and 66270.42, and are by this reference made part of this Permit. Specific sections of this Part B Permit Application are referenced elsewhere in this Permit.

2. The Owner and/or Operator shall modify, operate, maintain and close the Facility in accordance with the Part B Permit Application, unless otherwise specifically stated elsewhere in this Permit.

3. In the event of any conflict between this Permit and the Part B Permit Application referenced herein, the most stringent provisions shall be controlling.

4. The Part B Permit Application and this Permit shall be maintained at SSFL site at all times until post-closure care is completed and acknowledged by the Department. If operational control of the Boeing-owned facility is changed, the permit documents shall be maintained at some location on the property.

5. The Owner and/or Operator shall maintain the following written operating records at the Facility, in accordance with 22 CCR 66264.73.

   a. Cap Inspection and Repair Logs;

   b. Copy of Annual and Biennial Reports. (22 CCR 66264.75)

6. The Owner and/or Operator shall maintain at the Boeing-Rocketdyne SSFL Facility, until post-closure care is completed and certified by an independent, professional engineer registered in the State of California, the following documents and all amendments, revisions and modifications to these documents.

   a. The RCRA Facility Assessment (RFA).

   b. The RCRA Facility Investigation (RFI) Workplan and related documents when they are prepared.

   c. Inspection schedules, as required by CCR, Title 22, Section 66264.15 and this Permit.

   d. Personnel training documents and records, as required by CCR, Title 22, Section 66264.16 and this Permit.

   e. Contingency Plan, as required by CCR, Title 22, Section 66264.53 and this Permit.

   f. Operating records, as required by CCR, Title 22, Section 66264.73 and this Permit.

   g. Post-Closure Plan and Final Closure Plan as required by CCR, Title 22, Section 66264.112 and 66264.118 and this Permit.

   h. Annually adjusted cost estimate for facility closure and post-closure, as required by CCR, Title 22, Sections 66264.142, 66264.144, and this Permit.

   i. All other documents required by this Permit.

O. GENERAL RESPONSIBILITIES

1. Compliance

The Owner and/or Operator shall comply with all conditions of this Permit in accordance with 22 CCR 66270.30(a). The Owner and/or Operator shall comply with all laws, regulations, permits, zoning conditions, and all other requirements established by federal, state, and local agencies.

2. Transfer of the Permit

This Permit may be transferred to a new owner and/or operator only if it is modified or revoked and reissued pursuant to 22 CCR 66270.40 or 66270.41(b)(2). Before transferring ownership or operation of the Facility during its operating life or during the post-closure care period, if any, the Owner and/or Operator shall notify the new owner in writing of the requirements of this Permit, "Health and Safety Code" and "Title 22." The new owner or operator shall submit a revised permit application to the

Department at least ninety (90) days prior to the scheduled date of transfer. The revised permit application shall include a written agreement containing a specific date for transfer of permit responsibility, coverage and liability between the current and new owners and/or operators in accordance with 22 CCR 66270.40(b).

3. Operation and Maintenance

a. The Facility shall be maintained at all times and operated to minimize the possibility of a fire, explosion, or any unplanned sudden or non-sudden release of hazardous waste or hazardous waste constituents to air, soil, surface water, or groundwater which could threaten human health or the environment.

b. All equipment, pipes, and lines used at the Facility to handle, transfer, pump, or store hazardous wastes shall be maintained in a manner that prevents the leaking and spilling of hazardous wastes.

c. The Owner and/or Operator shall at all times properly operate and maintain all facilities and systems of treatment and control in accordance with 22 CCR 66270.30(e).

d. Conditions a, b, and c above shall apply to portable tanks used for the management of contaminated groundwater. Such tanks shall also be labeled so as to prevent drinking or other uses of the contents.

4. Monitoring and Records

a. Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity. The method used to obtain a representative sample of the waste to be analyzed must be the appropriate method from Appendix IX of Title 22 CCR Chapter 14 or an equivalent method approved by the Department. Laboratory methods must be those specified in Test Methods for Evaluating Solid Waste: Physical/Chemical Methods SW-846, Standard Methods of Waste Water Analysis, or an equivalent method, as specified in the Sampling and Analysis Plan (SAP) and Operations Plan.

b. The Owner and/or Operator shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports and records required by this Permit, the certification, required by 22 CCR 66264.73(b)(9), and records of all data used to complete the application for this Permit for a period of at least 3 years from the date of the sample, measurement, report, record, certification, or application. These periods may be extended by request of the Department at any time and are automatically extended during the course of any unresolved enforcement action regarding this Facility. [22 CCR 66264.74(b), 66270.30(j)(2)]

c. Pursuant to 22 CCR 66270.30(j)(3), records of monitoring information shall specify:

(1). The dates, exact place, and times of sampling or measurements;

(2). The individuals who performed the sampling or measurements;

(3). The dates analyses were performed;

(4). The individuals who performed the analyses;

(5). The analytical techniques or methods used; and

(6). The results of such analyses.

5. Submittal of Requested Information

The Owner and/or Operator shall furnish to the Department, within the time specified by the Department in its request, any relevant information which the Department may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this Permit, or to determine compliance with this Permit. The Owner and/or Operator shall also furnish to the Department, upon request, copies of records required to be kept by this Permit.

6. Hazardous Waste List

The Owner and/or Operator shall maintain a current list of hazardous wastes which corresponds to the Constituents of Concern (V.D.3) and spent activated carbon and any other hazardous wastes which may be generated as a result of the post-closure care required in this Permit.

7. Anticipated Noncompliance

The Owner and/or Operator shall give advance notice to the Department of any planned changes in the permitted Facility or activity which may result in noncompliance with permit requirements, in accordance with 22 CCR 66270.30(l)(2).

8. Noncompliance

a. In the event of noncompliance with this Permit, the Owner and/or Operator shall take all reasonable steps to minimize or correct releases to the environment, and shall carry out all measures as are reasonable to prevent and correct adverse impacts on human health or the environment.

b. The Owner and/or Operator shall report to the Department in writing all instances of noncompliance not specifically required under this Permit, as per 22 CCR 66270.30(l)(10).

9. Incomplete and/or Incorrect Information

Where the Owner and/or Operator becomes aware that any relevant facts were not submitted in a permit application, or incorrect information was submitted in a permit application or in any report to the Department, the Owner and/or Operator shall promptly submit such facts or information.

P. SIGNATORY REQUIREMENTS

1. The Owner and/or Operator shall comply with the signatory requirements in 22 CCR 66270.11 for all applications, reports, or information submitted to the Department.

2. The Owner and/or Operator must maintain documentation of an agreement for operation of the Facility between the property owner and the Facility operator at the Facility, if the Facility operator is different from the property owner. Whenever there is a change in the agreement, the Owner and/or Operator shall submit a copy of the new or revised agreement to the Department within thirty (30) calendar days of such a change.

PART III

SPECIAL CONDITIONS

A. SECURITY

The Owner and/or Operator shall comply with the security provisions of 22 CCR 66264.14. The Owner and/or Operator shall maintain the security measures described in the Part B Permit Application.

B. GENERAL INSPECTION REQUIREMENTS

1. The Owner and/or Operator shall inspect the Facility including groundwater systems and impoundment caps for malfunctions, erosion, deterioration, and discharges which may be causing, or may lead to, release of hazardous waste constituents to the environment or that threaten human health. The Owner and/or Operator shall conduct these inspections often enough to identify problems in time to correct them before they harm human health or the environment.

2. The Owner and/or Operator shall follow the written schedule in the Permit Condition VIII.D of the Part B Permit Application, June, 1991 Revised version for inspecting all monitoring equipment, safety equipment, security devices, and structural devices that are important to preventing, detecting, or responding to environmental or human health hazards.

3. The Owner and/or Operator shall remedy any deterioration or malfunction of equipment or structures which has been identified during an inspection. All remedial actions shall ensure that the problem does not lead to an environmental or human health hazard. Where a hazard is imminent or has already occurred, remedial action shall be taken immediately. The Department must be notified in writing within five business days of any remedial actions. [22 CCR 66264.15(c)]

4. The Owner and/or Operator shall keep the schedule specified in B.2 above at the Facility and maintain it with other documents required by this Permit.

5. The Owner and/or Operator shall record inspections in an inspection log or summary. At a minimum, these records shall include the date and time of the inspection, the name of the inspector, a notation of the observations made, and the date and nature of any repairs or other remedial actions. [22 CCR 66264.15(d)]

C. PERSONNEL TRAINING

1. Facility personnel shall successfully complete a program of instruction or on-the-job training that teaches them to perform their duties in a way that ensures the Facility's compliance with the conditions of this Permit. The Owner and/or Operator shall ensure that this program includes all the elements described under Permit condition III.C.

    a. This program shall include instruction which teaches facility personnel hazardous waste management procedures (including contingency plan implementation).

b. At a minimum, the training program shall be designed to ensure that facility personnel are able to respond effectively to emergencies by familiarizing them with emergency procedures, emergency equipment, and emergency systems, including procedures for inspecting and responding to releases from the Facility.

2. The Owner and/or Operator shall conduct personnel training, as required by 22 CCR 66264.16. This training program shall follow Section IX of the Part B Permit Application. The Owner and/or Operator shall maintain training documents and records, as required by 22 CCR 66264.16(d).

3. All employees who are designated to perform the waste sampling shall be trained in proper sampling techniques and implementation of the waste analysis plan. Such training shall include, at a minimum, but not be limited to the following:

a. procedures to operate, clean and maintain the waste testing or sampling equipment;

b. methods for sampling wastes in tanks including explanation of sampling devices, number of samples needed, sampling techniques, sample containers, tamper-proof custody seals, and chain-of-custody procedures;

c. safety equipment to be worn during inspection; and

d. procedures for labeling and marking containers.

This training shall be provided in addition to the training required by 22 CCR 66264.16. The Owner and/or Operator shall also provide annual refresher courses for such training to all personnel handling hazardous wastes.

D. PREPAREDNESS AND PREVENTION

1. Required Equipment

At a minimum, the Owner and/or Operator shall maintain at the Facility the equipment set forth in Section X.A.1.d. of the Part B Permit Application as required by 22 CCR 66264.32.

2. Testing and Maintenance of Equipment

The Owner and/or Operator shall test and maintain the equipment specified in Permit Condition III.D.1, as necessary, to assure its proper operation in time of emergency, as required by 22 CCR 66264.33.

3. Arrangements with Local Authorities

The Owner and/or Operator shall maintain arrangements with state and local authorities, as required by 22 CCR 66264.37. If state or local officials refuse to enter into preparedness and prevention arrangements with the Owner and/or Operator, the Owner and/or Operator must document this refusal in the operating record.

E. CONTINGENCY PLAN

1. Implementation of Plan

The Owner and/or Operator shall immediately carry out the provisions in the Contingency Plan designed to minimize hazards to human health and the environment whenever there is a fire, explosion, or release of hazardous waste or constituents which could threaten human health or the environment. [22 CCR 66264.51]

2. Copies of Plan

The Owner and/or Operator shall comply with the requirements of 22 CCR 66264.53.

3. Amendments to Plan

The Owner and/or Operator shall review and immediately amend, if necessary, the Contingency Plan, as required by 22 CCR 66264.54.

4. Emergency Coordinator

A trained emergency coordinator shall be available at all times in case of an emergency, as required by 22 CCR 66264.55.

F. RECORD KEEPING AND REPORTING

In addition to the record keeping and reporting requirements specified elsewhere in this Permit, the Owner and/or Operator shall do the following:

1. Maintain the Post-Closure Permit and other Environmental Permits on the SSFL site, or on the facility property if operational control of the facility changes.

2. The Owner and/or Operator shall notify the Department at least fourteen (14) days before engaging in any non-routine field activities, well drilling, installation of equipment, or sampling unless Boeing-Rocketdyne can demonstrate that such notice was not feasible. Upon request Boeing-Rocketdyne must be prepared to show that such notice was not feasible. At the request of Department, the Owner and/or Operator shall allow the Department or its authorized representative to take split samples of all samples collected by the Owner and/or Operator pursuant to this Permit.

G. MANIFEST REQUIREMENTS

The Owner and/or Operator shall comply with the manifest requirements of 22 CCR 66264.71, 66264.72 and 66264.76 whenever a shipment of hazardous waste is initiated from the Facility. The Owner and/or Operator shall comply with the requirements of 22 CCR Chapter 12 (Section 66262.10, et seq.) for generators of hazardous waste.

H. GENERATORS REQUIREMENTS

The Owner and/or Operator shall comply with all applicable requirements of 22 CCR Chapter 12 through 16 and the Health and Safety Code for hazardous waste generators for those wastes generated from normal operation, maintenance and/or post-closure activities.

I. SPECIAL REQUIREMENTS FOR IGNITABLE OR REACTIVE WASTE

1. The Owner and/or Operator shall take precautions to prevent accidental ignition or reaction of ignitable or reactive waste as required in 22 CCR 66264.17(a).

2. The Owner and/or Operator shall not locate containers holding ignitable or reactive waste within 15 meters (50 feet) of the Facility's property line as specified in 22 CCR 66264.176, unless otherwise specifically approved by a local fire authority.

3. The Owner and/or Operator shall not place ignitable or reactive waste in the tank system or in the secondary containment system.

4. The Owner and/or Operator shall comply with the applicable protective distance requirements for storing or treating ignitable or reactive wastes in tank systems and containers as required in Tables 2-1 through 2-6 of the National Fire Protection Association's "Flammable and Combustible Liquids Code" (1977 or 1981), unless otherwise specifically approved by a local fire authority. The Owner and/or Operator shall consult with Ventura County Fire Department to determine the protective distance required for storing or treating ignitable materials in the tank systems and containers, and provide documentation of compliance with such requirements to the Department within sixty (60) calendar days after the effective date of this Permit. [22 CCR 66264.198(b)]

5. The Owner and/or Operator shall comply with the applicable requirements of 22 CCR Chapter 16 and Chapter 18 (Article 12) for recyclable/incinerable materials. [22 CCR 66266.1, 66266.31 and 66266.34]

J. COST ESTIMATE FOR FACILITY CLOSURE AND POST-CLOSURE

1. The Owner and/or Operator's most recent final closure and post-closure cost estimates, prepared in accordance with 22 CCR 66264.142, are specified in the Application.

2. The Owner and/or Operator must adjust the final closure and post-closure cost estimates for inflation within 60 days prior to the anniversary date of the establishment of the financial instrument(s) used to comply with 22 CCR 66264.143 and Permit Condition III.J.1. or when using an approved state-required mechanism, upon such date as required by the state. [22 CCR 66264.142(b)]

3. The Owner and/or Operator must revise the final closure and post-closure cost estimate whenever there is a change in the facility's final closure and post-closure plans, as required by 22 CCR 66264.142(c).

4. The Owner and/or Operator must keep the latest final closure and post-closure cost estimates at the facility as required by 22 CCR 66264.142(d).

K. FINANCIAL ASSURANCE FOR FACILITY FINAL CLOSURE AND POST-CLOSURE

The Owner and/or Operator shall demonstrate continuous compliance with 22 CCR 66264.145 by providing documentation of financial assurance as required by 22 CCR 66264.151 or 66264.149. Changes in financial assurance mechanisms must be approved by the Director pursuant to 22 CCR 66264.143.

L. LIABILITY COVERAGE REQUIREMENTS

The Owner and/or Operator shall demonstrate continuous compliance with the requirements of 22 CCR 66264.147(a).

M. INCAPACITY OF OWNERS OR OPERATORS, GUARANTORS, OR FINANCIAL INSTITUTIONS

The Owner and/or Operator shall comply with 22 CCR 66264.148, whenever necessary.

N. PROHIBITION OF DISPOSAL

Pursuant to H&SC Section 25203, hazardous wastes shall not be disposed of at the Facility.

O. ANALYSIS OF WASTES GENERATED DURING POST-CLOSURE

1. Samples taken for the purpose of monitoring shall be representative of the monitored activity.
2. The Owner and/or Operator shall retain records of all monitoring information as part of the operating record until closure of the Facility.
3. Records of monitoring information shall include:
   a. The date, exact place, and time of sampling or measurement;
   b. The individual(s) who performed the sampling or measurements;
   c. The date(s) analyses were performed;
   d. The individual(s) who performed the analyses;
   e. The analytical techniques or methods used;
   f. The results of such analyses; and
   g. Collected drain water sampling/disposal.
4. All laboratory work done in connection with this Facility shall be performed by a laboratory certified by the State of California's Hazardous Waste Laboratory Certification Program.

5. For this Facility the Groundwater Sampling Plan shall be considered the Waste Analysis Plan. The Owner and/or Operator shall verify the waste analysis plan as related to groundwater and as set forth in this Permit. The Owner and/or Operator shall ensure that this plan includes all elements described under Permit condition V.G.2. This quality assurance program will be in accordance with current U.S. EPA practices (Test Methods for Evaluating Solid Wastes: Physical/Chemical Methods SW-846, 3rd edition) or equivalent methods approved by the Department; and at a minimum ensure that the Owner and/or Operator maintains proper functional instruments, uses approved sampling and analytical methods, assures the validity of sampling and analytical procedures, and performs correct calculations.

6. Upon the effective date of this permit, the Owner and/or Operator shall follow the written waste analysis plan as related to groundwater monitoring.

7. The Owner and/or Operator should include within its groundwater sampling annual report a discussion summarizing the findings of the groundwater sampling.

The Owner and/or Operator shall ensure that the treatment of any hazardous waste will not:

a. Generate extreme heat or pressure, fire or explosion, or violent reaction;

b. Produce uncontrolled toxic mists, fumes, dusts, or gases in sufficient quantities to threaten human health or the environment;

c. Produce uncontrolled flammable fumes or gases in sufficient quantities to pose a risk of fire or explosions;

d. Damage the structural integrity of the device or facility containing the waste; or

e. Through other like means threaten human health or the environment.

PART IV

POST-CLOSURE CARE

A. POST-CLOSURE ACTIVITIES

Post-closure activities for the closed hazardous waste surface impoundment units include inspection and maintenance of caps, rainfall run-off control, and operation and maintenance of monitoring systems (groundwater monitoring and treatment). The types and quantities of waste are described in the attachment of Part A permit application. The 30-year post-closure period began after completion of closure and may be shortened or extended as described in Permit Condition V.E. The 30-year post-closure began on August 9, 1994.

B. UNIT IDENTIFICATION

The Owner and/or Operator shall provide post-closure care for the following hazardous waste management units, subject to the terms and conditions of this Permit, and described as follows:

1. The groundwater extraction and monitoring system;

2. The following former surface impoundments, their caps and run-on control:

   a. Advanced Propulsion Test Facility, APTF-1

   b. Advanced Propulsion Test Facility, APTF-2

   c. Systems Test Laboratory-IV, STL-IV-1

   d. Systems Test Laboratory-IV, STL-IV-2

   e. Engineering Chemistry Laboratory Pond, ECL

C. POST-CLOSURE PROCEDURE AND USE OF PROPERTY

1. The Owner and/or Operator shall conduct post-closure care for the hazardous waste management units listed in Permit Condition IV.B.2. above, and continue for 30 years after August 9, 1994, except that the 30-year post-closure care period may be shortened upon application and demonstration approved by the Department that the Facility is secure, or may be extended by the Department if the Department finds this necessary to protect human health and the environment. [22 CCR 66264.117(a)]

2. The Owner and/or Operator shall maintain and monitor the groundwater monitoring system and comply with all other applicable requirements of 22 CCR Part 66264.90 - 100, during the post-closure period. [22 CCR 66264.117(A)(1)]

3. The Owner and/or Operator shall comply with the requirements for surface impoundments as follows: [22 CCR 66264.228(b)]

   a. Maintain the integrity and effectiveness of the final cover, including making repairs to the cap, as necessary, to correct the effects of settling, subsidence, erosion, storms, droughts and other events;

   b. Maintain and monitor the groundwater monitoring system and comply with all other applicable requirements of Section V of this permit and 22 CCR Chapter 14, Article 6 where applicable;

   c. Prevent run-on and run-off from eroding or otherwise damaging the final cover;

   d. Protect and maintaining surveyed benchmarks used in complying with the surveying and record keeping requirements.

4. The Owner and/or Operator shall comply with all security requirements. [22 CCR 66264.117]

5. The Owner and/or Operator shall not allow any use of the units designated in Permit Condition IV.B which will disturb the integrity of the final cover, of any components of the environmental control (containment) systems, or of the function of the Facility's monitoring systems during the post-closure care period. [22 CCR 66264.117]

6. The Owner and/or Operator shall implement the Post-Closure Plan.

   All post-closure care activities must be conducted in accordance with the provisions of the Post-Closure Plan. [22 CCR 66264.117(e) and 66264.118(b)]

7. If any repair to the groundwater control systems, exclusive of routine maintenance and post-repair monitoring is found to extend beyond one week from the initiation of the work, the Owner and/or Operator shall inform the Department and the Ventura County Air Pollution Control District of the repair immediately after such a finding by telephone or fax, and in writing within 24 hours of such a finding.

8. Cracks and/or erosion in the cap shall be staked and repaired within 20 working days, or before the next rainfall event, whichever occurs first. In the event of ponding, the Owner and/or Operator shall eliminate standing water on the cap within 48 hours, and adjust the grading and drainage within 20 days or before the next rainstorm, whichever occurs first.

9. Repairs shall be completed before the next rainfall event. If this is not possible, the Owner and/or Operator shall take temporary measures to minimize infiltration and shall document their efforts and the reasons completion was not possible prior to the rainfall, and shall notify the Department.

10. Well abandonment procedures shall conform with requirements of all State and local agencies as applicable.

11. An inspection and monitoring program shall be establish at every closed disposal area wherein an independent, qualified engineer registered in California shall annually evaluate and document the condition of all surface improvements, drainage facilities, erosion control facilities, and vegetative cover. The engineer shall also evaluate the items listed at 66264.228.(k) 1- 14 as applicable.

12. Soil borings must be logged or directly overseen by a California registered geologist, civil engineer, or certified engineering geologist. The Unified Soil Classification System must be used, and percent recovery reported on the logs. All reports detailing and interpreting results of the subsurface investigation activities at the site must be signed by either a registered geologist, civil engineer or a certified engineering geologist properly registered in the state of California. This registered individual must have provided direct oversight of the project, and be present at the site during enough of the sampling activities to demonstrate span-of-control.

13. The Owner and/or Operator shall notify the Department at least two weeks before beginning the installation of any wells and probes necessary to gather data to assess groundwater extraction treatment effectiveness except as in response to an emergency condition or potential noncompliance.

14. Inspection of all blowers, pumps, etc., shall include inspection of bearings and leak testing of seals at a frequency recommended by the manufacturer.

D. AMENDMENT TO POST-CLOSURE PLAN

The Owner and/or Operator shall amend the Post-Closure Plan in accordance with 22 CCR 66264.118(d), whenever necessary.

E. NOTICES AND CERTIFICATION

1. No later than 90 days after the effective date of the permit, the Owner and/or Operator shall submit to the local zoning authority, or the authority with jurisdiction over local land use, and to the Director a record of the type, location, and quantity of hazardous wastes disposed of within each cell or other disposal unit at the Facility. For hazardous wastes disposed of before January 12, 1981, the Owner and/or Operator shall identify the type, location, and quantity of the hazardous wastes to the best of his knowledge and in accordance with any records he has kept. [22 CCR 66264.119(a)]

2. Within 90 days after the effective date of the permit, the Owner and/or Operator shall:

   a. Record, in accordance with California law, a notation on the deed to the Facility property or on some other instrument that is normally examined during a title search, that will in perpetuity notify any potential purchaser of the property that:

      i. The land has been used to manage hazardous wastes; and

      ii. Its use is restricted under 22 CCR 66264.117.

   b. Submit a certification to the Department, signed by the Owner and/or Operator, that he has recorded the notation specified in Permit Condition IV.E.2.a, including a copy of the document in which the notation has been placed. [22 CCR 66264.119(b)]

3. If the Owner and/or Operator or any subsequent owner or operator of the land upon which the groundwater extraction and monitoring appurtenant equipment is located, wishes to remove hazardous wastes and hazardous waste residues, or contaminated soils, then he shall request a modification to this Post Closure Permit in accordance with the applicable requirements in 22 CCR Parts 66264 and 66270. The Owner and/or Operator or any subsequent owner or operator of the land shall demonstrate that the removal of hazardous wastes will satisfy the criteria of 22 CCR 66264.117(c). [22 CCR 66264.119(c)]

F. FINANCIAL ASSURANCE FOR POST-CLOSURE

The Owner and/or Operator shall maintain financial assurance during the post-closure period and comply with all applicable requirements of 22 CCR Part 66264. [22 CCR 66264.145]

G. POST-CLOSURE PLAN MODIFICATIONS

The Owner and/or Operator must request a permit modification to authorize any change in the approved Post-Closure Plan. This request must be in accordance with applicable requirements of 22 CCR Parts 66264 and 66270, and must include a copy of the proposed amended Post-Closure Plan for approval by the Department. The Owner and/or Operator shall request a permit modification whenever changes in operating plans or facility design affect the approved Post-Closure Plan. The Owner and/or Operator must submit a written request for a permit modification at least 60 days prior to the proposed change in facility design or operation, or no later than 60 days after an unexpected event has occurred which has affected the Post-Closure Plan. [22 CCR 66264.118(d)]

H. CERTIFICATION OF COMPLETION OF POST-CLOSURE

No later than 60 days after completion of the established post-closure care period for a hazardous waste disposal unit, the Owner and/or Operator shall submit to the Department, by registered mail, a certification that post-closure care for the hazardous waste disposal unit was performed in accordance with the specifications in the approved Post-Closure Plan. The certification must be signed by the Owner and/or Operator and an independent, registered professional engineer. Documentation supporting the independent, registered professional engineer's certification must be furnished to the Director upon request until the Director releases the Owner and/or Operator from the financial assurance requirements for post-closure care under 22 CCR 66264.145(I), and 22 CCR 66264.120.

PART V

GROUNDWATER MONITORING

A. INTRODUCTION

This part of the permit addresses the requirements of California Code of Regulations, title 22, division 4.5, chapter 14, article 6 - Water Quality Monitoring and Response Program for Permitted Facilities. Five surface impoundments (SIs) are located within the 785-acre Area I and III facility. These SIs have undergone closure following a closure plan approved by the Department in 1988. As "regulated units", defined in California Code of Regulations, title 22, section 66264.90, the closed hazardous waste surface impoundments at the Facility must be in compliance with California Code of Regulations, title 22, division 4.5, chapter 14, article 6.

The Owner and/or Operator shall conduct a monitoring and response program for each regulated unit, as required by California Code of Regulations, title 22, section 66264.91. The specific elements of each monitoring and response program are discussed below and are summarized in Table 7 - Water Quality Monitoring Program. There exists statistically significant evidence of a release from the surface impoundment areas. Consequently, the Owner and/or Operator shall institute an evaluation monitoring program.

Under California Code of Regulations, title 22, section 66270.14, subsection (c)(8), the Owner and/or Operator is required to submit information, data, and analysis to establish a "corrective action program" under California Code of Regulations, title 22, section 66264.100. The Owner and/or Operator is currently performing site characterization of groundwater contamination under a previously issued Order. Until the site characterization is completed and a specific corrective measure is selected by the Department, detailed plans and an engineering report describing the final corrective action to be taken and a specific groundwater monitoring program capable of demonstrating the adequacy of the corrective action may be deferred. This does not affect the Owner and/or Operator's responsibility to implement interim remedial measures and evaluation groundwater monitoring or limit the requirements of any other regulatory agency.

In conjunction with the evaluation monitoring program or the corrective action program, the Owner and/or Operator shall continue to conduct a detection monitoring program as necessary to provide the best assurance of the detection of subsequent releases from the regulated unit(s). [Cal. Code Regs., title 22, §66264.91, subsec. (c)].

The components of the Water Quality Protection Standard (WQPS) are detailed below in Section D. This WQPS will apply for both the detection and evaluation monitoring programs.

B. COMPLIANCE WITH GROUNDWATER CORRECTIVE ACTION

Until such time as a corrective action program is approved and incorporated into this permit, the Owner and/or Operator shall monitor and maintain groundwater wells as required under interim remedial measures. The facility Water Quality Sampling and Analysis Plans includes provisions for the interim remedial measures.

C. WASTE MANAGEMENT AREA

The Waste Management Area is the limit projected in the horizontal plane of the area on which waste has been placed during the active life of the regulated unit. The waste management area includes horizontal space taken up by any liner, dike or other barrier designed to contain waste in the regulated unit. [Cal. Code Regs., title 22, § 66264.95, subsec. (b), -(b)(1)]

D. WATER QUALITY PROTECTION STANDARD

The Owner and/or Operator must submit to the Department for review and approval any proposal for the installation of groundwater monitoring well(s) which will be used to fulfill the requirements of this permit.

1. Point of Compliance - Groundwater Monitoring Wells

For each regulated unit, the Owner and/or Operator shall monitor the constituents of concern at monitoring points located at the point of compliance. The point of compliance is a vertical surface, located at the hydraulically downgradient limit of the waste management area that extends through the uppermost aquifer underlying the regulated unit. [Cal. Code Regs., title 22, § 66264.95, subsec. (a)]

The Post-Closure Permit issued in April 1995 assigned the following point-of-compliance wells for the five closed surface impoundments in Area I and III:

1995 Post-Closure Permit Point of Compliance Wells	
APTF-1	HAR-16
APTF-2	HAR-16
STL-IV-1	HAR-17
STL-IV-2	HAR-17
ECL	SH-4

The Department granted a Permit Modification dated November 12, 2004 which approved the new point of compliance wells shown in Table 1. Unless otherwise noted, wells shown in Table 1 shall be the Point of Compliance Monitoring Wells for the detection monitoring program and the evaluation monitoring program for Areas I and III.

TABLE 1
POINT-OF-COMPLIANCE MONITORING WELLS
AREA I and III

Regulated Unit Area I and III SIs	Point of Compliance Well
APTF-1	HAR-02 HAR-16
APTF-2	HAR-16 PZ-089
ECL	SH-03
STL-IV-1	ES-17
STL-IV-2	*PC-01

* PC-01 to be constructed after Permit Modification granted November 12, 2004.

The point-of-compliance wells (Table 1) shall be sampled quarterly for the monitoring parameters listed in Table 4 (Constituents of Concern) for at least one year. After one-year, DTSC will evaluate the data. Based on the data, sampling at point-of-compliance wells for Table 4 Constituents of Concern may be changed to semi-annual, unless the data indicates more frequent sampling is warranted.

The point-of-compliance wells (Table 1) shall be sampled annually for Appendix IX parameters.

2. Background Monitoring Wells

The Owner and/or Operator shall establish a background groundwater monitoring system for each regulated unit that includes

a. a sufficient number of background monitoring points installed at appropriate locations and depths to yield groundwater samples from the uppermost aquifer that represent the quality of groundwater that has not been affected by a release from the regulated unit. [Cal. Code Regs., title 22, § 66264.97, subsec. (b)(1)(A)]

b. for a detection monitoring program, a sufficient number of monitoring points and background monitoring points installed at appropriate locations and depths to yield groundwater samples from other aquifers, low-yielding saturated zones and from zones of perched water as necessary to provide the best assurance of the earliest possible detection of a release or continued release from a regulated unit. [Cal. Code Regs., title 22, § 66264.97, subsec. (b)(1)(B)(3)]

c. for an evaluation monitoring program, a sufficient number of monitoring points and background monitoring points installed at appropriate locations and depths to yield groundwater samples from other aquifers, low-yielding saturated zones and from zones of perched water as necessary to provide the data needed to evaluate changes in water quality due to the release from the regulated unit. [Cal. Code Regs., title 22, § 66264.97, subsec. (b)(1)(C)(2)]

d. for a corrective action program, a sufficient number of monitoring points and background monitoring points installed at appropriate locations and depths to yield groundwater samples from other aquifers, low-yielding saturated zones and from zones of perched water as necessary to provide the data needed to evaluate compliance with the water quality protection standard and to evaluate the effectiveness of the corrective action program. [Cal. Code Regs., title 22, § 66264.97, subsec. (b)(1)(D)(2)]

The Post-Closure Permit issued in April 1995 designated the following background monitoring wells:

RD-6
RD-47
RD-13
RD-48 A, B, C

The Department granted a Permit Modification dated November 12, 2004 which approved the new background monitoring wells shown in Table 2. Unless otherwise noted, wells shown in Table 2 shall be the Background Monitoring Wells for the detection monitoring program and the evaluation monitoring program for Areas I and III.

TABLE 2
BACKGROUND MONITORING WELLS
AREA I and III

Regulated Unit Area I and III SIs	Background Monitoring Well
APTF-1	~~HAR-24~~ ~~PZ-003~~
APTF-2	~~HAR-02~~ ~~HAR-24~~
ECL	SH-07
STL-IV-1	ES-26
STL-IV-2	ES-17

The groundwater monitoring system may include background monitoring points that are not hydraulically upgradient of the regulated unit if the Owner and/or Operator demonstrates to the satisfaction of the Department that sampling at other monitoring points will provide samples that are representative of the background quality of groundwater or are more representative than those provided by the upgradient monitoring points. [Cal. Code Regs., title 22, § 66264.97, subsec. (b)(2)]

In order to establish background concentrations for the constituents of concern and to select an appropriate statistical method, the Owner and/or Operator shall sample the background monitoring wells (Table 2) for those chemical constituents and physical parameters listed in Table 3 (Background General Water Quality Parameters) and Table 4 (Constituents of Concern) on a quarterly basis for a period of at least 1 year. Background wells shall then be tested for Table 3 and Table 4 parameters annually.

If any constituents of concern are detected in a background monitoring well above the concentration limit and verified, the Owner and/or Operator shall submit, to the Department, in the next quarterly progress report, a proposal for an alternate well. Background shall then be recalculated using data from the new, Department-approved well together with the remaining background wells.

TABLE 3
BACKGROUND GENERAL WATER QUALITY PARAMETERS

pH
electroconductivity
calcium
magnesium
sodium
potassium
manganese
iron
strontium
zinc
ammonia
alkalinity
chloride
nitrate
fluoride
total dissolved solids
turbidity
sulfate

3. Constituents of Concern

a. The list of chemicals in Table 4 shall be considered "Constituents of Concern" as required in California Code of Regulations, title 22, section 66264.93.

b. Based on the results of analysis of Appendix IX sampling, any Appendix IX constituents detected above background, and not already on the current list of Constituents of Concern, shall be added to the list.

4. Concentration Limits

The concentration limits for the constituents of concern are listed in Table 4 and shall be established as follows:

Equal to the background value of each constituent as determined pursuant to California Code of Regulations, title 22, section 66264.97, subsection (e)(11)(B).

During detection and evaluation monitoring, concentration limits are set equal to background. Constituents of concern will fall into one of the following four categories: Category 1 - compounds that are never detected in background wells; category 2 - compounds detected in less than 50% of background samples; category 3 - compounds detected in greater than 50% of background samples; and category 4 - common laboratory contaminants.

a. CATEGORY 1: For category 1 compounds, the concentration limit shall be equal to the Practical Quantification Limit (PQL).

Note: Because this method will fail to identify consistent low level indications of a release, the following conditions will be considered significant evidence of a release:

(1). a compound is detected above the PQL in a downgradient monitoring point;

(2). a compound is detected above the detection limit, but below the PQL, in two successive samples or more than once in a twelve-month period;

(3). more than one compound is detected above the detection limit, but below the PQL at a single monitoring point during a single monitoring event; or

(4). a compound is detected above the detection limit, but below the PQL, and a review of the available data shows trends or other indications that a release may have occurred.

b. CATEGORY 2: For category 2 compounds, the concentration limit shall be equal to the maximum concentration reported for the background data or the PQL (whichever is highest) with additional provisions for detecting low level contamination as presented below:

(1). a compound is detected in a downgradient monitoring point above the maximum concentration that has been reported for background data.

Note: The distribution of background data should be tested so that outliers are identified. Outliers must not be used to represent the maximum background concentration for a compound. The ASTME-178-75 document "Statistical Analysis of Groundwater Monitoring Data at RCRA Facilities, Interim Final Guidance, 1989", pages 8-11 through 8-14, and the July 1992 addendum thereto, pages 80 and 81, have been placed in Attachment B of this Permit and will be employed to test if a data point is an outlier.

(2). a compound is detected above the method detection limit but below the maximum background concentration, and a review of available data shows trends or other indications that a release may have occurred.

c. CATEGORY 3: For category 3 compounds, the concentration limit shall be equal to background as determined using the procedures discussed in Permit Condition V.J.

d. CATEGORY 4: For category 4 compounds (common laboratory contaminants such as methylene chloride and acetone), the Concentration Limit shall be determined by the appropriate method, either under Category 1, 2, or 3, based on evaluation of the analytical data. However, the statistical procedure need not be performed in those instances where the detected compound was obviously present as the result of laboratory contamination, and this can be verified and documented by the laboratory. In the event that the laboratory cannot document that the compound was present as the result of laboratory contamination, the appropriate statistical procedure must be performed.

Based on these criteria, the Owner and/or Operator shall propose concentration limits for each constituent of concern.

For a corrective action program, the Owner and/or Operator may propose concentration limits greater than background after meeting the requirements of California Code of Regulations, title 22, section 66264.94, subsections (c), (d), (e), (f), and (g).

TABLE 4
CONSTITUENTS OF CONCERN and CONCENTRATION LIMITS
For Area I and III

CONSTITUENT OF CONCERN	ANALYTICAL METHOD	CONCENTRATION LIMITS*
Constituents of Concern for ALL REGULATED UNITS in AREA I and III		
acetone	EPA 8260B	Equal to Background Value as determined by 22 CCR 66264.97(3)(11)(B)
carbon tetrachloride	EPA 8260B	Equal to Background Value as determined by 22 CCR 66264.97(3)(11)(B)
methylene chloride	EPA 8260B	Equal to Background Value as determined by 22 CCR 66264.97(3)(11)(B)
chloroform	EPA 8260B	Equal to Background Value as determined by 22 CCR 66264.97(3)(11)(B)
fluoride	EPA 340.2	Equal to Background Value as determined by 22 CCR 66264.97(3)(11)(B)
trichlorofluoromethane (Freon 11)	EPA 8260B	Equal to Background Value as determined by 22 CCR 66264.97(3)(11)(B)
1,1,2-trichloro-1,2,2-trifluoroethane (Freon 113, Freon TF)	EPA 8260B	Equal to Background Value as determined by 22 CCR 66264.97(3)(11)(B)
formaldehyde	EPA 8315A	Equal to Background Value as determined by 22 CCR 66264.97(3)(11)(B)
ammonia	EPA 350.2	Equal to Background Value as determined by 22 CCR 66264.97(3)(11)(B)
nitrate	EPA 353.2	Equal to Background Value as determined by 22 CCR 66264.97(3)(11)(B)
methyl ethyl ketone	EPA 8260B	Equal to Background Value as determined by 22 CCR 66264.97(3)(11)(B)
benzene	EPA 8260B	Equal to Background Value as determined by 22 CCR 66264.97(3)(11)(B)
toluene	EPA 8260B	Equal to Background Value as determined by 22 CCR 66264.97(3)(11)(B)

CONSTITUENT OF CONCERN	ANALYTICAL METHOD	CONCENTRATION LIMITS*
xylenes	EPA 8260B	Equal to Background Value as determined by 22 CCR 66264.97(3)(11)(B)
ethylbenzene	EPA 8260B	Equal to Background Value as determined by 22 CCR 66264.97(3)(11)(B)
tetrachloroethene (perchloroethylene, PCE)	EPA 8260B	Equal to Background Value as determined by 22 CCR 66264.97(3)(11)(B)
trichloroethene (TCE)	EPA 8260B	Equal to Background Value as determined by 22 CCR 66264.97(3)(11)(B)
cis-1,2-dichloroethene (*cis*-1,2-DCE)	EPA 8260B	Equal to Background Value as determined by 22 CCR 66264.97(3)(11)(B)
trans-1,2-dichloroethene (*trans*-1,2-DCE)	EPA 8260B	Equal to Background Value as determined by 22 CCR 66264.97(3)(11)(B)
1,1-dichloroethene (1,1-DCE)	EPA 8260B	Equal to Background Value as determined by 22 CCR 66264.97(3)(11)(B)
vinyl chloride	EPA 8260B	Equal to Background Value as determined by 22 CCR 66264.97(3)(11)(B)
1,1,1-trichloroethane (1,1,1-TCA)	EPA 8260B	Equal to Background Value as determined by 22 CCR 66264.97(3)(11)(B)
1,1,2-trichloroethane (1,1,2-TCA)	EPA 8260B	Equal to Background Value as determined by 22 CCR 66264.97(3)(11)(B)
1,2-dichloroethane (1,2-DCA)	EPA 8260B	Equal to Background Value as determined by 22 CCR 66264.97(3)(11)(B)
1,1-dichloroethane (1,1-DCA)	EPA 8260B	Equal to Background Value as determined by 22 CCR 66264.97(3)(11)(B)
1,4-dioxane	EPA 8260B	Equal to Background Value as determined by 22 CCR 66264.97(3)(11)(B)
N-nitrosodimethylamine (dimethylnitrosamine, NDMA)	EPA 8270 C	Equal to Background Value as determined by 22 CCR 66264.97(3)(11)(B)
nitrobenzene	EPA 8260B	Equal to Background Value as determined by 22 CCR 66264.97(3)(11)(B)

CONSTITUENT OF CONCERN	ANALYTICAL METHOD	CONCENTRATION LIMITS *
1,3-dinitrobenzene	EPA 8260B	Equal to Background Value as determined by 22 CCR 66264.97(3)(11)(B)
perchlorate	EPA 314.0	Equal to Background Value as determined by 22 CCR 66264.97(3)(11)(B)
Additional Constituents of Concern for APTF-1 and APTF-2		
pH	EPA 9040B	Equal to Background Value as determined by 22 CCR 66264.97(3)(11)(B)
monomethyl hydrazine (MMH)	DTSC-approved GC method	Equal to Background Value as determined by 22 CCR 66264.97(3)(11)(B)
hydrazine	DTSC-approved GC method or ASTM D1385(2001) for hydrazine in water	Equal to Background Value as determined by 22 CCR 66264.97(3)(11)(B)
isopropyl alcohol, 2-propanol	EPA 8260B	Equal to Background Value as determined by 22 CCR 66264.97(3)(11)(B)
kerosene fuel (RP-1, JP-1, JP-4)	EPA 8015 DRO; 8260B	Equal to Background Value as determined by 22 CCR 66264.97(3)(11)(B)
naphthalene (napthene)	EPA 8260B	Equal to Background Value as determined by 22 CCR 66264.97(3)(11)(B)
semi-volatile organic compounds (phthalates)	EPA 8070	Equal to Background Value as determined by 22 CCR 66264.97(3)(11)(B)
unsymmetrical dimethylhydrazine; (1,1-dimethylhydrazine), (UDMH)	DTSC-approved GC method	Equal to Background Value as determined by 22 CCR 66264.97(3)(11)(B)

CONSTITUENT OF CONCERN	ANALYTICAL METHOD	CONCENTRATION LIMITS*
Additional Constituents of Concern for ECL		
pH	EPA 9040B	Equal to Background Value as determined by 22 CCR 66264.97(3)(11)(B)
sulfuric acid	EPA 375.4	Equal to Background Value as determined by 22 CCR 66264.97(3)(11)(B)
sodium azide	DTSC-approved GC method	Equal to Background Value as determined by 22 CCR 66264.97(3)(11)(B)
Additional Constituents of Concern for STL-IV-1 and STL-IV-2		
pH	EPA 9040B	Equal to Background Value as determined by 22 CCR 66264.97(3)(11)(B)
monomethyl hydrazine (MMH)	DTSC-approved GC method	Equal to Background Value as determined by 22 CCR 66264.97(3)(11)(B)
hydrazine	DTSC-approved GC method or ASTM D1385(2001) for hydrazine in water	Equal to Background Value as determined by 22 CCR 66264.97(3)(11)(B)
isopropyl alcohol, 2-propanol	EPA 8260B	Equal to Background Value as determined by 22 CCR 66264.97(3)(11)(B)
unsymmetrical dimethylhydrazine; (1,1-dimethylhydrazine), (UDMH)	DTSC-approved GC method	Equal to Background Value as determined by 22 CCR 66264.97(3)(11)(B)

* Per Permit Condition V.D.4
22 CCR refers to California Code of Regulations, title 22

E. COMPLIANCE PERIOD

The compliance period is the time during which the groundwater protection standard applies. It is set as the number of years equal to the active life of the waste management area (including any waste management activity prior to permitting and the closure period). The calculation of the compliance period includes the time that the unit was operating prior to permitting.

Closure Date: August 1994
First Waste Disposal: 1948
Compliance Period: 46 years

The compliance period shall begin when the Owner and/or Operator initiates a compliance monitoring program meeting the requirements of California Code of Regulations, title 22, section 66264.99. The compliance monitoring program shall be approved by the Department and shall begin after completion of the corrective action program.

If the Owner and/or Operator is engaged in a corrective action program at the end of the compliance period, the compliance period is extended until the owner/operator can demonstrate that the concentrations limits have not been exceeded for a period of three consecutive years.

F. APPENDIX IX MONITORING

The owner or operator shall analyze samples from all monitoring points in the affected medium (groundwater, surface water or the unsaturated zone) for all constituents contained in Appendix IX (Cal. Code Regs., tit. 22, div. 4.5, chapter 14, appendix IX) at least annually to determine whether additional hazardous constituents are present and, if so, at what concentration(s). [Cal. Code Regs., title 22, § 66264.99, subsec. (e)(6)]

Unless indicated otherwise in this permit, Appendix IX sampling at monitoring points in the affected medium shall include monitoring points at the point of compliance, monitoring points in the detection monitoring program and monitoring points in the evaluation monitoring program that have been established for each regulated units. Appendix IX sampling is not required for monitoring points outside the affected medium until and/or unless releases from a regulated unit reach or is suspected to have reached the monitoring point.

If the owner or operator finds Appendix IX constituents in the groundwater, surface water or the unsaturated zone that are not already identified in the permit as constituents of concern, the owner or operator may resample within one month and repeat the analysis for those constituents. If the second analysis confirms the presence of new constituents, the owner or operator shall report the concentration of these additional constituents to the Department by certified mail within seven days after the completion of the second analysis and the Department shall add them to the list of constituents of concern specified in the facility permit unless the owner or operator demonstrates to the satisfaction of the Department that the constituent is not reasonably expected to be in or derived from waste in the regulated unit. If the owner or operator does not resample, then the owner or operator shall report the concentrations of these additional constituents to the Department by certified mail within seven days after completion of the initial analysis and the Department shall add them to the list of constituents of concern specified in the facility permit unless the owner or operator demonstrates to the satisfaction of the Department that the constituent is not reasonably expected to be in or derived from waste in the regulated unit. [Cal. Code Regs., title 22 § 66264.99, subsec. (e)(6)]

G. GENERAL WATER QUALITY MONITORING AND SYSTEM REQUIREMENTS

1. General Groundwater Requirements

The Owner and Operator shall conduct a monitoring and response program for each regulated unit as required by California Code of Regulations, title 22 section 66264.91. The detection and evaluation water quality monitoring programs shall comply with Permit Condition V.D and the following subsections:

a. In conjunction with an evaluation monitoring program or a corrective action program, the Owner and/or Operator shall continue to conduct a detection monitoring program as necessary to provide the best assurance of the detection of subsequent released from the regulated unit. [Cal. Code Regs., title 22 § 66264.91, subsec. (c)]

b. For the evaluation monitoring program, one well at each impoundment will represent the quality of water passing the point of compliance, and additional wells will monitor other areas of the facility to provide data needed to evaluate changes in water quality due to the releases from the regulated units. All wells are included in Table 7.

c. An interim corrective measures monitoring program is included with the regulated units monitoring program in Table 7. This Permit will be modified to include implementation of selected corrective measures after completion of the corrective measures study (part of corrective action).

d. A copy of the driller's logs shall be filed with the Department of Water Resources for all wells in the Post-Closure Plan.

e. All monitoring wells shall be constructed properly to enable collection of representative groundwater samples, including the specifications under California Code of Regulations, title 22, section 66264.97, subsections (b)(4) through (b)(7).

f. All monitoring wells drilled to satisfy the requirements of this Permit shall be logged during drilling under the direct supervision of a California registered geologist.

g. The Owner and/or Operator shall establish a surface water monitoring system to monitor each surface water body that could be affected by a release from the regulated unit. Each surface water monitoring system shall include the appropriate items under California Code of Regulations, title 22, section 66264.97, subsection (c)(2).

h Except as otherwise provided, the Owner and/or Operator shall establish an unsaturated zone monitoring system for each regulated unit. The unsaturated zone monitoring system shall include the appropriate items under California Code of Regulations, title 22, section 66264.97, subsections (d)(2), (d)(3), and (d)(4).

i Unsaturated zone monitoring is required at all new regulated units unless the Owner and/or Operator demonstrates to the satisfaction of the Department that such methods of unsaturated zone monitoring cannot provide an indication of a release from the regulated unit. For a regulated unit that has operated or has received all permits necessary for construction and operation before July 1, 1991, unsaturated zone monitoring is required unless the Owner and/or Operator demonstrates to the satisfaction of the Department that either there is no

unsaturated zone monitoring device or method designed to operate under the subsurface conditions existent at that waste management unit or the installation of unsaturated zone monitoring devices would require unreasonable dismantling or relocating of permanent structures. [Cal. Code Regs., title 22, § 66264.97, subsec. (d)(5)].

2. Sampling and Analysis Procedures

a. The approved water quality sampling and analysis plan (WQSAP), to be submitted as a separate document, shall include sampling and analytical procedures that are designed to ensure that monitoring results provide a reliable indication of water quality at all monitoring points and background monitoring points. The WQSAP shall meet the requirements of these subsections and include a detailed Quality Assurance Project Plan (QAPP). The Owner and/or Operator shall follow all procedures and reporting requirements in the approved WQSAP. The WQSAP shall be a stand alone document.

b. Groundwater sampling shall be conducted quarterly for detection monitoring wells and evaluation monitoring wells for at least one-year. DTSC will review this data. After one-year, sampling frequency for detection monitoring and evaluation monitoring wells may be reduced to semi-annual, unless the data indicates that more frequent sampling is warranted. The quarterly and semi-annual sampling should coincide with the anticipated maximum and minimum groundwater elevation levels.

c. The Owner and/or Operator shall determine the water table or potentiometric surface elevation at each well on a quarterly frequency.

d. The Owner and/or Operator shall measure the water level in each well and determine the groundwater flow rate and direction in the uppermost aquifer (near surface groundwater and Chatsworth Formation), quarterly. The WQSAP shall contain explicit details of how water levels will be determined and during which months the measurements will be made.

e. The Owner and/or Operator shall accurately determine the groundwater surface elevation (to calculate purging volume) and field parameters (temperature, electrical conductivity, turbidity, oxidation/reduction potential, and pH) at each well each time the groundwater is sampled. Details of the collection procedures will be specified in the WQSAP.

3. Well Abandonment

Any wells or boring which are abandoned shall be plugged and abandoned as specified by the Department, RWQCB and any other agencies with regulatory responsibility.

4. Assignment of Wells in the Groundwater Program

A permit modification will not be required for a transfer of a well between detection, evaluation or corrective action portions of the program or construction of new extraction wells, for example, since elements of multiple groundwater programs are already included simultaneously in this Permit. However, Boeing-Rocketdyne must provide notice to the Department prior to any such transfer or construction and obtain prior written approval from the Branch Chief. Furthermore, Boeing-Rocketdyne must submit, as part of its annual groundwater monitoring reports, a listing of the wells currently included under each program and a summary of the modifications made to the program during the previous calendar year. Permit modifications will still be required for significant changes to the groundwater program such as cessation of corrective action.

H. DETECTION MONITORING PROGRAM

In conjunction with the evaluation monitoring program or the corrective action program, the Owner and/or Operator shall continue to conduct a detection monitoring program as necessary to provide the best assurance of the detection of subsequent releases from the regulated units. [Cal. Code Regs., title 22, § 66264.91, subsec. (c)]. Table 5 shows the wells and associated regulated unit that are to be sampled pursuant to this detection monitoring program.

1. For a detection monitoring program, the Owner and/or Operator shall establish a groundwater monitoring system for each regulated unit and shall include [Cal. Code Regs., title 22, § 66264.97, subsec. (b)(1)(B)]:

   a. a sufficient number of monitoring points installed at appropriate locations and depths to yield groundwater samples from the uppermost aquifer that represent the quality of groundwater passing the point of compliance and to allow for the detection of a release from the regulated unit;

   b. a sufficient number of monitoring points installed at additional locations and depths to yield groundwater samples from the uppermost aquifer as necessary to provide the best assurance of the earliest possible detection of a release from the regulated unit; and

   c. a sufficient number of monitoring points and background monitoring points installed at appropriate locations and depths to yield groundwater samples from other aquifers, low-yielding saturated zones and from zones of perched water as necessary to provide the best assurance of the earliest possible detection of a release from the regulated unit.

TABLE 5
DETECTION MONITORING PROGRAM WELLS
AREA I and III

Regulated Unit Area I and III SIs	Detection Monitoring Program Well(s)
APTF-1	HAR-02 HAR-16
APTF-2	HAR-16 PZ-089
ECL	SH-02 SH-03 SH-09
STL-IV-1	ES-17
STL-IV-2	*PC-01 RS-14

* New well PC-01 to be constructed after the approval of the 2004 permit modification request.

2. The detection monitoring system will comply with the provisions of California Code of Regulations, title 22, section 66264.98, which includes the list of constituents of concern (Table 4), concentration limits, and establishes a water quality protection standard.

   For at least one-year, the Owner and/or Operator shall collect samples from the detection monitoring wells (Table 5) quarterly for the background monitoring parameters listed in Table 3 and quarterly for the constituents of concern listed in Table 4. DTSC will review this data. After one-year, the detection monitoring wells may be sampled semi-annually for Table 4 Constituent of Concerns and annually for Table 3 Background Parameters, unless the data indicates more frequent sampling is warranted.

3. For the detection monitoring system, the Owner and/or Operator shall determine if there is statistically significant evidence of a release as specified in this monitoring plan, Permit Condition V.J. The Owner and/or Operator shall make this determination within 90 days of collecting samples. If a release is verified, the Owner and/or Operator shall (1) notify the Department within 7 days of receiving verification, (2) sample the impacted well for Appendix IX constituents within 60 days, and (3) submit a proposal to DTSC to investigate the release determination within 90 days. However, if the Owner and/or Operator does not think that this Appendix IX sampling will produce useful information, they may petition the Department for a waiver of this requirement. The impacted well will be moved to the evaluation monitoring program. A permit modification and feasibility study will not be required because corrective action for the entire site will be addressed as part of the corrective

measures. However, the Owner and/or Operator must report these determinations in the next quarterly report and the information must be incorporated into the site-wide interim corrective measures if necessary.

a. If the Owner and/or Operator determines that there is statistical significant evidence of a release, the Owner and/or Operator may demonstrate that a source other than the Santa Susana facility caused the evidence of a release or that such evidence is an artifact caused by an error in sampling, analysis, or statistical evaluation, or by natural variation in the ground water [Cal. Code Regs., title 22, § 66264.98, subsec. (k)(7)]. In making a demonstration pursuant to this subsection, the Owner and/or Operator shall:

   i. Within seven days of determining statistically significant evidence of a release, notify the Department by certified mail that the Owner and/or Operator intends to make a demonstration pursuant to this subsection [Cal. Code Regs., title 22, § 66264.98, subsec. (k)(7)(A)].

   ii. Within 90 days of determining statistically significant evidence of a release, submit a report to the Department that demonstrates that a source other than the Santa Susana facility caused the evidence, or that the evidence resulted from error in sampling, analysis, or evaluation, or from natural variation in ground water [Cal. Code Regs., title 22, § 66264.98, subsec. (k)(7)(B)].

   iii. A permit modification will be required if a new release causes a change to the monitoring program, except as provided in Permit section V.G.4 [Cal. Code Regs., title 22, § 66264.98, subsec. (k)(7)(C)].

   iv. Continue to monitor in accordance with the detection monitoring program established under this section [Cal. Code Regs., title 22, § 66264.98, subsec. (k)(7)(D)].

b. If the Owner and/or Operator determines that there is significant physical evidence of a release as described in California Code of Regulations, title 22, section 66264.91, subsection (a)(3) or that the detection monitoring program does not satisfy the requirements of this section, the Owner and/or Operator shall:

   i. notify the Department by certified mail within seven days of such determination; and

   ii. submit an application for a permit modification to make any appropriate changes to the program [Cal. Code Regs., title 22, § 66264.98, subsec. (l)].

c. Whenever the Department determines that the detection monitoring program does not satisfy the requirements of this section of the Permit, the Department shall send written notification of such determination to the Owner and/or Operator by certified mail, return receipt requested. The Owner and/or Operator shall, within 90 days after receipt of such notification by the Department, submit an application for a permit modification to make any appropriate changes to the program [Cal. Code Regs., title 22, § 66264.98, subsec. (m)].

d. The requirements of California Code of Regulations, title 22, section 66264.98, subsection (n) shall only apply after completion of a corrective action program [Cal. Code Regs., title 22, § 66264.98, subsec. (n)].

I. EVALUATION MONITORING

1. The Owner and/or Operator shall establish an evaluation monitoring program for each regulated unit and shall include the following [Cal. Code Regs., title 22, § 66264.97, subsec. (b)(1)(C)]:

   a. a sufficient number of monitoring points installed at appropriate locations and depths to yield groundwater samples from the uppermost aquifer that represent the quality of groundwater passing the point of compliance, and at other locations in the uppermost aquifer as necessary, to provide the data needed to evaluate changes in water quality due to the release from the regulated unit; and

   b. a sufficient number of monitoring points and background monitoring points installed at appropriate locations and depths to yield groundwater samples from the other aquifers, low-yielding saturated zones and zones of perched water as necessary to provide the data needed to evaluate changes in water quality due to the release from the regulated unit.

2. The evaluation monitoring program shall be used to assess the nature and extent of the release from the regulated unit and to design a corrective action program. The purpose of this evaluation monitoring program is to provide a reliable indication of any migration of the known contaminant plume and to monitor for changes within the plume until a determination of the horizontal and vertical extent of contamination are defined and the pattern of groundwater movement is understood. For the evaluation monitoring program, the Owner and/or Operator shall collect and analyze all data necessary to assess the nature and extent of the release from the regulated unit. This assessment shall include a determination of the spatial distribution and concentration of each constituent of concern throughout the zone affected by the release.

3. As stated above, the Owner and/or Operator will monitor groundwater to evaluate changes in water quality partially resulting from releases from the regulated units. Table 6 shows the wells that are to be sampled pursuant for this evaluation monitoring program. Each regulated unit is associated with the wells to be used for the evaluation monitoring program for that regulated unit. Table 6 also indicates which evaluation monitoring program wells are known or suspected to be in the affected media from the release of a regulated unit.

   For at least one-year, the Owner and/or Operator shall sample each evaluation monitoring well for the constituents of concern listed in Table 4 on a quarterly basis. DTSC will review this data. After one-year, the evaluation monitoring wells may be sampled semi-annually for Table 4 Constituents of Concern, unless the data indicates more frequent sampling is warranted.

   Those evaluation monitoring wells identified as known or suspected to be in the affected media from the release of a regulated unit shall be sampled for Appendix IX constituents on an annual basis.

TABLE 6
EVALUATION MONITORING PROGRAM WELLS
AREA I and III

Regulated Unit Area I and III SIs	Evaluation Monitoring Program Well(s)
APTF-1	HAR-01 (aff) HAR-02 (aff) HAR-03 (aff) HAR-16 (aff) HAR-25 OS-17 OS-24 OS-26 RD-03 RD-36A RD-36B RD-36C RD-36D RD-37 RD-38A RD-38B RD-39A RD-39B RD-43A RD-43B RD-43C RD-45A RD-45B RD-45C RD-46A RD-46B RD-48A RD-48B RD-48C RD-51A RD-51B RD-51C RD-52A RD-52B RD-52C RD-53 RS-07

Regulated Unit Area I and III SIs	Evaluation Monitoring Program Well(s)
APTF-2	HAR-01 (aff) HAR-03 (aff) HAR-04 (aff) HAR-16 (aff) PZ-089 (aff) HAR-25 OS-17 OS-24 OS-26 RD-03 RD-36A RD-36B RD-36C RD-36D RD-37 RD-38A RD-38B RD-39A RD-39B RD-43A RD-43B RD-43C RD-45A RD-45B RD-45C RD-46A RD-46B RD-48A RD-48B RD-48C RD-51A RD-51B RD-51C RD-52A RD-52B RD-52C RD-53 RS-07

Regulated Unit Area I and III SIs	Evaluation Monitoring Program Well(s)
ECL	HAR-26 (aff) RD-08 (aff) RD-11 (aff) RD-12 (aff) SH-03 (aff) SH-04 (aff) SH-09 (aff) SH-11 (aff)
STL-IV-1	ES-17 (aff) ES-27 (aff) ES-33 (aff) HAR-32 RD-06 RD-55A RD-55B RD-58A RD-58B RD-58C RS-13
STL-IV-2	*PC-01 (aff) PZ-035 (aff) RS-14 (aff) HAR-32 RD-06 RD-55A RD-55B RD-58A RD-58B RD-58C RS-13

* New well PC-01 to be constructed after the approval of the 2004 permit modification request.

(aff) Evaluation monitoring program wells that are known or suspected to be in the affected media from a release of a regulated unit.

4. Because the Owner and/or Operator is conducting interim corrective measures (extraction and treatment), monitoring at all extraction wells will be required. Table 7 lists the extraction wells for the interim corrective measures that are connected to the permitted treatment systems.

   The Owner and/or Operator shall collect samples from the extraction wells (Table 7) on a semi-annual basis and tested for all the constituents of concern listed in Table 4, including those constituents designated for a specific regulated unit. In the case of shallow wells that do not have sufficient water to extract, monitoring will be required only when extraction is occurring, up to a frequency of semi-annually.

5. If the Owner and/or Operator determines that the evaluation monitoring program does not satisfy the requirements of this section of the Permit, the Owner and/or Operator shall, within 90 days, submit an application for a permit modification to make any appropriate changes to the program.

6. Whenever the Department determines that the evaluation monitoring program does not satisfy the requirements of this section of the Permit, the Department shall send written notification of such determination to the Owner and/or Operator by certified mail, return receipt requested. The Owner and/or Operator shall, within 90 days of such notification, submit an application for a permit modification to make appropriate changes to the program.

J. STATISTICAL PROCEDURE

After review of the data collected from the background wells, as specified in California Code of Regulations, title 22, section 66264.97, subsection (e)(6), the Owner and/or Operator shall propose an appropriate statistical method, pursuant to California Code of Regulations, title 22, section 66264.97, subsection (e)(7), for comparison to background for each constituent of concern. An ANOVA statistical test, as proposed by the Owner and/or Operator, is allowed by the regulations, but may not be the most effective or efficient statistical technique.

Statistical Methods

For the purpose of this permit, the Practical Quantification Limit (PLQ) is defined as 5 to 10 times the Method Detection Limit (MDL). The individual state-certified laboratory performing the analysis will provide the exact determination (between 5 and 10 times the MDL) according to the most reliably reached limits while conducting the analysis under routine laboratory operating conditions. All compounds detected at concentrations above the MDL but below the PQL must be reported as estimated concentrations and flagged as such in all reports.

This subsection describes acceptable statistical methods. In addition to the statistical procedures listed under this subsection, the following are acceptable tests for censored data (i.e., data below the PQL):

1. For compounds that have never been detected in background samples, each of the following conditions will be considered significant evidence of a release and will require that approved verification procedures be implemented during the next regularly scheduled quarterly sampling:

   a. a compound is detected above the PQL in a downgradient monitoring point;

   b. a compound is detected above the detection limit, but below the PQL, in two successive samples or more than once in a twelve-month period;

c. more than one compound is detected above the detection limit, but below the PQL at a single monitoring point during a single monitoring event; or

d. a compound is detected above the detection limit, but below the PQL, and a review of the available data shows trends or other indications that a release may have occurred.

2. For compounds detected in less than 50% of all background samples, which do not fall under the first category, the following conditions will be considered significant evidence of a release and will require that approved verification procedures be implemented during the next regularly scheduled quarterly sampling:

a. a compound is detected in a downgradient monitoring point above the maximum concentration that has been reported for background data.

Note: The distribution of background data should be tested so that outliers are identified. Outliers must not be used to represent the maximum background concentration for a compound. The ASTME-178-75 document "Statistical Analysis of Groundwater Monitoring Data at RCRA Facilities, Interim Final Guidance, 1989", pages 8-11 through 8-14, and the July 1992 addendum thereto, pages 80 and 81, have been placed in Attachment B of this Permit and will be employed to test if a data point is an outlier.

b. a compound is detected above the method detection limit but below the maximum background concentration, and a review of available data shows trends or other indications that a release may have occurred.

Note: Method Detection Limits (MDLs) shall be derived by the laboratory for each analytical procedure, according to the State of California Environmental Laboratory Accreditation Program (ELAP), (which currently references procedures in 40 CFR Part 136, Appendix B). The MDL should always be calculated such that it represents a concentration associated with a 99% reliability of a "non-zero" result. These MDLs shall reflect the detection capabilities of the specific analytical procedure and equipment used by the laboratory (also in the QAPP). MDLs reported should not simply be restated from U.S. EPA analytical method manuals.

These methods shall be used to determine statistically significant evidence of a release.

c. *Verification*

(1). The Owner and/or Operator must submit (along with the statistical methods) a proposed verification procedure to be implemented whenever the facility determines that there is statistically significant evidence of a release for any monitoring parameter or constituent of concern at any monitoring point.

Note: The California Code of Regulations, title 22, section 66264.97, subsection (e)(8)(E) states that verification must begin within 30 days of determining statistically significant evidence of a release. The Department will allow verification samples to be collected at the next scheduled quarterly sampling.

(2). The proposed statistical methods, discussed in Permit Condition V.J. must meet the performance standards in California Code of Regulations, title 22, section 66264.97, subsection (e)(9).

Based on the statistical methods proposed in Permit Condition V.J. and based on the background data collected, the Owner and/or Operator shall choose an appropriate statistical procedure for determining background and submit the calculated values to the Department.

K. RECORDKEEPING AND REPORTING

The Owner and/or Operator shall submit annual comprehensive monitoring reports. These reports shall be submitted to the Branch Chief of the Southern California Permitting Branch, DTSC Glendale Office. These reports must contain the following information:

1. Raw monitoring data (field logs and activity sheets that support interpretations in reports, depth to water data, well-head data, immiscible layer data, field monitoring parameter results, purge volume data, and on-scene observations).

2. Sampling and transport data (field data sheets and chain-of-custody forms that support interpretations in reports).

3. Laboratory summary sheets (chromatograph, IR spectra, other machine outputs, and QA/QC data that support interpretations in reports). This information may be in electronic computer-readable form.

4. Data tabulations, graphic water level, potentiometric surface, flow direction, and available flow rate data.

5. Contaminant plume maps for all contaminants for which there are more than solitary spatially isolated detects and where the spatial distribution of a contaminant warrants preparation of such a map as confirmed by DTSC.

In addition, the Owner and/or Operator will submit quarterly progress reports with ground water level tabulated, and a potentiometric surface map showing flow directions. Any significant findings or changes to the monitoring program will be discussed in these reports.

TABLE 7
WATER QUALITY MONITORING PROGRAM
AREA I and III

GROUNDWATER MONITORING PROGRAM	GENERAL BACKGROUND PARAMETERS (Table 3)	CONSTITUENTS OF CONCERN (Table 4)	APPENDIX IX
BACKGROUND MONITORING WELLS For Area I and III:	Quarterly for at least one-year; Annually thereafter.	Quarterly for at least one-year; Annually thereafter.	
well (surface impoundment)			
ES-17 (STL-IV-2)			
ES-26 (STL-IV-1)			
~~HAR-02~~ (APTF-2)			
~~HAR-24~~ (APTF-1, APTF-2)			
~~PZ-003~~ (APTF-1)			
SH-07 (ECL)			
POINT-OF-COMPLIANCE MONITORING WELLS for Areas I and III:		Quarterly for at least one-year; Semi-annually thereafter	Annually
well (regulated unit)			
ES-17 (STL-IV-1)			
HAR-02 (APTF-1)			
HAR-16 (APTF-1, APTF-2)			
*PC-01 (STL-IV-2)			
PZ-089 (APTF-2)			
SH-03 ECL			
* New well PC-01 to be constructed after approval of the 2004 Permit Modification			

GROUNDWATER MONITORING PROGRAM	GENERAL BACKGROUND PARAMETERS (Table 3)	CONSTITUENTS OF CONCERN (Table 4)	APPENDIX IX
DETECTION MONITORING PROGRAM WELLS for Area I and III:	Quarterly for at least one-year; Annually thereafter	Quarterly for at least one-year; Semi-Annually thereafter	
well **(regulated unit)**			
ES-17 (STL-IV-1)			
HAR-02 (APTF-1)			
HAR-16 (APTF-1, APTF-2)			
*PC-01 (STL-IV-2)			
PZ-089 (APTF-2)			
RS-14 (STL-IV-2)			
SH-02 (ECL)			
SH-03 (ECL)			
SH-09 (ECL)			
* New well PC-01 to be constructed after approval of the 2004 Permit Modification			
EVALUATION MONITORING PROGRAM WELLS for Area I and III:		Quarterly for at least one-year; Semi-Annually thereafter	Annually for wells in the affected media only
well **(regulated unit)**			
ES-17 (STL-IV-1)			(aff)
ES-27 (STL-IV-1)			(aff)
ES-33 (STL-IV-1)			(aff)
HAR-01 (APTF-1, APTF-2)			(aff)
HAR-02 (APTF-1)			(aff)
HAR-03 (APTF-1, APTF-2)			(aff)
HAR-04 (APTF-2)			(aff)
HAR-16 (APTF-1, APTF-2)			(aff)

GROUNDWATER MONITORING PROGRAM	GENERAL BACKGROUND PARAMETERS (Table 3)	CONSTITUENTS OF CONCERN (Table 4)	APPENDIX IX
HAR-26 (ECL)			(aff)
*PC-01 (STL-IV-2)			(aff)
PZ-089 (APTF-2)			(aff)
PZ-035 (STL-IV-2)			(aff)
RD-08 (ECL)			(aff)
RD-11 (ECL)			(aff)
RD-12 (ECL)			(aff)
RS-14 (STL-IV-2)			(aff)
SH-03 (ECL)			(aff)
SH-04 (ECL)			(aff)
SH-09 (ECL)			(aff)
SH-11 (ECL)			(aff)
HAR-25 (APTF-1, APTF-2)			
HAR-32 (STL-IV-1, STL-IV-2)			
OS-17 (APTF-1, APTF-2)			
OS-24 (APTF-1, APTF-2)			
OS-26 (APTF-1, APTF-2)			
RD-03 (APTF-1, APTF-2)			
RD-06 (STL-IV-1, STL-IV-2)			
RD-36A (APTF-1, APTF-2)			
RD-36B (APTF-1, APTF-2)			
RD-36C (APTF-1, APTF-2)			
RD-36D (APTF-1, APTF-2)			
RD-37 (APTF-1, APTF-2)			
RD-38A (APTF-1, APTF-2)			
RD-38B (APTF-1, APTF-2)			
RD-39A (APTF-1, APTF-2)			

GROUNDWATER MONITORING PROGRAM	GENERAL BACKGROUND PARAMETERS (Table 3)	CONSTITUENTS OF CONCERN (Table 4)	APPENDIX IX
RD-39B (APTF-1, APTF-2)			
RD-43A (APTF-1, APTF-2)			
RD-43B (APTF-1, APTF-2)			
RD-43C (APTF-1, APTF-2)			
RD-45A (APTF-1, APTF-2)			
RD-45B (APTF-1, APTF-2)			
RD-45C (APTF-1, APTF-2)			
RD-46A (APTF-1, APTF-2)			
RD-46B (APTF-1, APTF-2)			
RD-48A (APTF-1, APTF-2)			
RD-48B (APTF-1, APTF-2)			
RD-48C (APTF-1, APTF-2)			
RD-51A (APTF-1, APTF-2)			
RD-51B (APTF-1, APTF-2)			
RD-51C (APTF-1, APTF-2)			
RD-52A (APTF-1, APTF-2)			
RD-52B (APTF-1, APTF-2)			
RD-52C (APTF-1, APTF-2)			
RD-53 (APTF-1, APTF-2)			
RD-55A (STL-IV-1, STL-IV-2)			
RD-55B (STL-IV-1, STL-IV-2)			
RD-58A (STL-IV-1, STL-IV-2)			
RD-58B (STL-IV-1, STL-IV-2)			
RD-58C (STL-IV-1, STL-IV-2)			
RS-07 (APTF-1, APTF-2)			
RS-13 (STL-IV-1, STL-IV-2)			
* New well PC-01 to be constructed after approval of the 2004 Permit Modification			

GROUNDWATER MONITORING PROGRAM		GENERAL BACKGROUND PARAMETERS (Table 3)	CONSTITUENTS OF CONCERN (Table 4)	APPENDIX IX
(aff) Wells known or suspected of being in the affected media from the release of a regulated unit.				
CORRECTIVE ACTION INTERIM MEASURE, EXTRACTION WELL SYSTEMS for Area I and III:			Semi-Annually (for all COCs in Table 4)	
well	**(regulated treatment unit)**			
ES-01	(Area I: Road AS, WS-5 UV/P)			
ES-03	(Area I: Road AS, WS-5 UV/P)			
ES-04	(Area I: Road AS, WS-5 UV/P)			
ES-05	(Area I: Road AS, WS-5 UV/P)			
ES-06	(Area I: Road AS, WS-5 UV/P)			
ES-07	(Area I: Road AS, WS-5 UV/P)			
ES-11	(Area I: WS-5 UV/P)			
ES-14	(Area III: STL-IV AS)			
ES-17	(Area III: STL-IV AS)			
ES-23	(Area III: STL-IV AS)			
ES-24	(Area III: STL-IV AS)			
ES-26	(Area III: STL-IV AS)			
ES-27	(Area III: STL-IV AS)			
ES-30	(Area III: STL-IV AS)			
ES-32	(Area III: STL-IV AS)			
HAR-04	(Area I: WS-5 UV/P)			
HAR-16	(Area I: WS-5 UV/P)			
HAR-17	(Area III: STL-IV AS)			
HAR-18	(Area III: STL-IV AS)			
RD-01	(Area I: Canyon AS, WS-5 UV/P)			
RD-02	(Area I: Road AS, WS-5 UV/P)			

GROUNDWATER MONITORING PROGRAM	GENERAL BACKGROUND PARAMETERS (Table 3)	CONSTITUENTS OF CONCERN (Table 4)	APPENDIX IX
WS-05 (Area I: WS-5 UV/P)			
WS-06 (Area I: Alfa AS)			
ECL French Drain (Area III: STL-IV AS)			
ECL Sump (Area III: STL-IV AS)			

APTF-1 = Advanced Propulsion Test Facility Pond 1
APTF-2 = Advanced Propulsion Test Facility Pond 2
ECL = Engineering Chemistry Laboratory Pond
STL-IV-1 = Systems Test Laboratory IV Pond 1
STL-IV-2 = Systems Test Laboratory IV Pond 2
UV/P = ultraviolet light / hydrogen peroxide treatment unit
AS = air stripping treatment unit

PART VI

TANKS AND APPURTENANT EQUIPMENT

A. INTRODUCTION

This part of the Permit addresses the requirements of 22 CCR Chapter 14, Articles 9 and 10 as they apply to the use of tanks, containers, and appurtenant equipment for the management of hazardous waste (Table 8).

B. PERMITTED AND PROHIBITED WASTE IDENTIFICATION

The Owner and/or Operator may only store or treat contaminated groundwater, as described in Part V of this Permit, and other hazardous wastes associated with post-closure activities, at the units listed in Table 8.

C. SECONDARY CONTAINMENT AND INTEGRITY ASSESSMENTS

1. For tank systems used to store or treat materials that are defined as hazardous waste in the future, the Owner and/or Operator must obtain a written assessment of the existing tank system integrity within 12 months from the date the waste is defined as hazardous. [22 CCR 66264.191(c)] The assessment shall be certified by an independent, qualified, registered professional engineer. [22 CCR 66264.191(a) and (b)]

2. The Owner and/or Operator shall inspect, maintain and operate secondary containment systems in accordance with the detailed descriptions contained in Section VIII. D of the Part B Permit Application. [22 CCR 66264.193(b)-(f)]

   a. For ancillary equipment, a leak test (or other integrity method as approved by the Department) must be conducted. [22 CCR 66264.193(i)(3)]

   b. If a tank system or component is found to be leaking or unfit for use as a result of the leak test or assessment, the Owner and/or Operator shall comply with Permit Condition VI.E. of this Permit and notify the Regional Administrator, in accordance with Permit Condition VI.G. of this Permit. [22 CCR 66264.193(i)(6)]

D. OPERATING REQUIREMENTS

1. The Owner and/or Operator shall not place hazardous wastes or treatment reagents in the tank system if they could cause the tank, its ancillary equipment, or a containment system to rupture, leak, corrode, or otherwise fail. [22 CCR 66264.194(a)]

2. The Owner and/or Operator shall prevent spills and overflows from the tank or containment systems. [22 CCR 66264.194(b)]

E. RESPONSE TO LEAKS OR SPILLS

In the event of a leak or a spill from the tank system, from a secondary containment system, or if a system becomes unfit for continued use, the Owner and/or Operator shall remove the system from service immediately and complete the following actions [22 CCR 66264.196(a)-(f)]:

1. Stop the flow of hazardous waste into the system and inspect the system to determine the cause of the release.

2. Remove waste and accumulated precipitation from the system within 24 hours of the detection of the leak to prevent further release and to allow inspection and repair of the system. If the Owner and/or Operator finds that it will be impossible to meet this time period, the Owner and/or Operator shall notify the Department and demonstrate that a longer time period is required.

   If the collected material is a California or RCRA hazardous waste, it must be managed in accordance with all applicable requirements of 22 CCR. The Owner and/or Operator shall note that if the collected material is discharged through a point source to U.S. waters or to a POTW, it is subject to requirements of the Clean Water Act. If the collected material is released to the environment, it may be subject to reporting under 40 CFR Part 302.

3. Contain visible releases to the environment. The Owner and/or Operator shall immediately conduct a visual inspection of all releases to the environment and based on that inspection:

   a. prevent further migration of the leak or spill to soils or surface water; and

   b. remove and properly dispose of any visible contamination of the soil or surface water.

4. Spilled or leaked waste and accumulated precipitation must be removed from the trench, sump or collection area within twenty-four (24) hours after its discovery.

5. The collected material from a leak, a spill or accumulated precipitation at any solid waste management unit or its containment system shall be managed as hazardous waste unless the Owner and/or Operator has established in accordance with the requirements of 22 CCR 66261.3(d) that the collected material is not a hazardous waste. The Owner and/or Operator shall comply with the applicable requirements of 22 CCR 66264.176, 66264.178 and 66264.193(c)(4) concerning the collected material.

6. For all major repairs to eliminate leaks or restore the integrity of the tank system, the Owner and/or Operator must obtain a certification by an independent, qualified, registered professional engineer that the repaired system is capable of handling hazardous wastes without leaking for the intended life of the system before returning the system to service. Examples of major repairs are: installation of an internal liner, repair of a ruptured tank, or repair or replacement of a secondary containment vault.

F. INSPECTION SCHEDULES AND PROCEDURES

1. The Owner and/or Operator shall inspect the tank systems, in accordance with the Inspection Schedules.

2. The Owner or Operator shall develop and follow a schedule and procedure for inspecting overfill controls and shall inspect the overfill controls at least once each operating day to ensure that they are in good working order. [Cal. Code Regs., title 22, § 66264.195, subsec. (a)]

3. The Owner or Operator shall inspect at least once each operating day [Cal. Code Regs., title 22, § 66264.195, subsec. (b)]:

   a. aboveground portion of the tank system, if any, to detect corrosion or releases of waste;

   b. data gathered from monitoring and leak detection equipment (e.g., pressure or temperature gauges, monitoring wells) to ensure that the tank system is being operated according to its design; and

   c. the construction materials and the area immediately surrounding the externally accessible portion of the tank system, including the secondary containment system (e.g. dikes) to detect corrosion, erosion or signs of releases of hazardous waste (e.g., wet spots, dead vegetation).

4. The Owner and/or Operator shall document compliance with Permit Conditions VI.F.2.- 3. and place this documentation in the operating record for the facility. [Cal. Code Regs., title 22, § 66264.195, subsec. (d)]

5. Daily operating inspection are only required while the unit is operating. Daily operating inspections are not required for treatment units that have been placed on standby status and are not operating. For those treatment units on standby status, the Owner and/or Operator shall document compliance by noting in the operating record that the unit is 1) not operating and 2) on standby status at the time of the scheduled inspection. The Owner and/or Operator shall resume daily operating inspections immediately after a standby unit has resumed operation.

6. The Owner and/or Operator shall develop an inspection schedule for the treatment systems that are on standby status. The Owner and/or Operator shall inspect the standby treatment systems to access and maintain the systems availability for operation.

G. RECORD-KEEPING AND REPORTING

1. The Owner and/or Operator shall report to the Department, within 24 hours of detection, when a leak or spill occurs from the tank system or secondary containment system to the environment. [22 CCR 66264.196(d)(1)] (A leak or spill of one pound or less of hazardous waste, that is immediately contained and cleaned-up, need not be reported.) [22 CCR 66264.196(b)(5)(B)] (Releases that are contained within a secondary containment system need not be reported.) If the Owner and/or Operator has reported the release pursuant to 40 CFR Part 302, this report satisfies the requirements of this Permit Condition. [22 CCR 66264.196(d)(1)]

2. Within 30 days of detecting a release to the environment from the tank system or secondary containment system, the Owner and/or Operator shall report the following information to the Department: [22 CCR 66264.196(d)(3)]

   a. Likely route of migration of the release;

   b. Characteristics of the surrounding soil (including soil composition, geology, hydrogeology, and climate);

c. Results of any monitoring or sampling conducted in connection with the release;

d. Proximity of downgradient drinking water, surface water, and populated areas; and

e. Description of response actions taken or planned.

If the Owner and/or Operator finds it will be impossible to meet the 30 day due date, the Owner and/or Operator should provide the Department with a schedule of when the results will be available. This schedule must be provided before the required 30-day submittal period expires.

3. The Owner and/or Operator shall submit to the Department all certifications of major repairs to correct leaks within seven days from returning the tank system to use. [22 CCR 66264.196(f)]

4. The Owner and/or Operator shall keep on file at the facility the written assessment of the tank system's integrity. [22 CCR 66264.191(a)]

5. The Owner and/or Operator shall maintain at the facility a record of the results of leak tests and integrity tests conducted.

H. CLOSURE AND POST-CLOSURE CARE

The Owner and/or Operator shall continue to operate the groundwater extraction systems as long as hazardous waste or hazardous waste constituents remain at the site in quantities which could endanger human health and the environment. At the end of the surface impoundment unit's post-closure period, or sooner, if Corrective Action is complete, the Owner and/or Operator shall close the tank system(s), following the procedures in the final closure plan.

I. MAXIMUM STORAGE TIME AND LABEL REQUIREMENTS

The Owner and/or Operator shall not store off-site generated hazardous waste at all, or on-site generated waste in the facility for a period of more than one year from the accumulation date the waste is generated. A label shall be maintained on all containers in which hazardous wastes are stored. Labels shall include the following information:

1. composition and physical state of the waste;

2. special safety recommendations and precautions for handling the waste;

3. statements which call attention to the particular hazardous properties of the waste;

4. name and address of the person producing the waste; and

5. date the accumulation began.

J. CONTAMINATED CONTAINER REQUIREMENTS

Drums contaminated with hazardous wastes shall be decontaminated [or treated in accordance with 22 CCR 67450.11(a)(11)(A)] before being reused to store chemical products or reclaimed material. Any empty drums shall be handled as hazardous wastes except as provided in 22 CCR 66261.7.

K. SPECIAL TANK PROVISIONS FOR IGNITABLE OR REACTIVE WASTES

1. The Owner and/or Operator shall not place ignitable or reactive waste in the tank system or in the secondary containment system. [22 CCR 66264.198(a)]

2. The Owner and/or Operator shall comply with the requirements for the maintenance of protective distances between the waste management area and any public ways, streets, alleys, or an adjoining property line than can be built upon, as required in Tables 2-1 through 2-6 of the National Fire Protection Association's "Flammable and Combustible Liquids Code" (1977 or 1981). [22 CCR 66264.198(b)]

L. SPECIAL TANK PROVISIONS FOR INCOMPATIBLE WASTES

1. The Owner and/or Operator shall not place incompatible wastes, or incompatible wastes and materials, in the same tank system or the same secondary containment system.

2. The Owner and/or Operator shall not place hazardous waste in a tank system that has not been decontaminated and that previously held an incompatible waste or material. [22 CCR 66264.17(b)]

TABLE 8
TANKS/CONTAINERS
CONTAINMENT VOLUMES/CAPACITY
AREA I and III

Treatment System	Description	Content	Capacity (gpm)	Capacity (gal)	Largest vessel at treatment unit (gal)*	Containment Volume (gal)
Alfa AS (Area I)	2 air stripping towers	contaminated groundwater	175		1128	1745
Alfa AS (Area I)	8 55-gallon carbon canisters	vapor phase VOCs adsorbed to carbon		440		
Area I Road AS (Area I)	2 air stripping towers	contaminated groundwater	35		1128	1310
Area I Road AS (Area I)	2 55-gallon carbon canisters	vapor phase VOCs adsorbed to carbon		110		
Canyon AS (Area I)	2 air stripping towers	contaminated groundwater	35		1128	1310
Canyon AS (Area I)	2 55-gallon carbon canisters	vapor phase VOCs adsorbed to carbon		110		
STL-IV AS (Area III)	2 air stripping towers	contaminated groundwater	35		1128	1310
STL-IV AS (Area III)	2 55-gallon carbon canisters	vapor phase VOCs adsorbed to carbon		110		
WS-5 UV/P (Area I)	ultra-violet light / hydrogen peroxide treatment	contaminated groundwater	450		1000	1012
WS-5 UV/P (Area I)	hydrogen peroxide feed tank	50% H_2O_2		1000		
ECL	french drain collection system	contaminated groundwater	N/A			N/A

* Assumes 7.05" free board for rain which is not included in the volume

AS - air stripping system
VOC - volatile organic compounds
UV/P - ultra-violet light /peroxidation system
gpm - gallons per minute
gal - gallons
H_2O^2 - Hydrogen peroxide

PART VII

CORRECTIVE ACTION FOR SOLID WASTE MANAGEMENT UNITS

A. AUTHORITY

The Health and Safety Code (H&SC) Section 25200.10 requires that permits issued by the Department of Toxic Substances Control (Department) must address corrective action for releases of hazardous waste including hazardous constituents from any Solid Waste Management Unit (SWMU) at the facility, regardless of when the waste was placed in the unit.

Failure to comply with any term or condition set forth in this Part of the Permit in the time or manner specified herein will subject the Owner and/or Operator to possible enforcement action and penalties pursuant to H&SC Section 25187.

In addition, failure to submit the information required in this Part of the Permit, or falsification and/or misrepresentation of any submitted information, is grounds for termination of this Permit (22 CCR 66270.43).

Compliance by the Owner and/or Operator with the terms of this Part of the Permit shall not relieve the Owner and/or Operator of its obligation to comply with any other applicable local, state or federal laws and regulations including, but not limited to, waste discharge requirements, cleanup and abatement orders or any other enforcement orders issued by a Regional Water Quality Control Board.

B. STATEMENT OF PURPOSE

The purposes of this part of the Permit are: (1) to provide a specification to the Permittee as to the manner of completing work previously begun relating to corrective action for solid waste management units, and (2) to report and remediate newly identified releases or newly discovered SWMUs through adequate Corrective Action procedures.

1. With regard to SWMUs already identified in the RFA report, Boeing-Rocketdyne shall employ the attached Scopes of Work for all future corrective action activities. (Boeing-Rocketdyne need not submit an RFI workplan and Current Conditions Report for these SWMUs, since this workplan has already been submitted and approved.)

   These specifications and procedures shall include requirements, as appropriate, to:

   a. if necessary, perform Interim Measures (IM) at the Facility to relieve threats to human health and/or the environment,

   b. implement the RCRA Facility Investigation (RFI) to determine fully the nature and extent of any release of hazardous waste and/or hazardous constituents at or from the Facility;

   c. perform a Corrective Measure Study (CMS) to identify and evaluate alternatives for the corrective action necessary to prevent, mitigate and/or remediate any releases of hazardous wastes or hazardous constituents at or from the Facility;

d. perform Corrective Measure Implementation (CMI) to implement the corrective measure or measures selected by the Department at the Facility; and

e. perform any other activities necessary to correct actual or potential threats to human health and/or the environment resulting from the release or potential release of hazardous waste or hazardous constituents at the Facility.

Since the groundwater contamination at the site is apparently a result of releases from both SWMUs and regulated units (the closed surface impoundments), the groundwater characterization and cleanup previously addressed under the interim status post-closure regulations, shall now be under the groundwater section of the Post-Closure Permit. Contaminated soils at the SWMUs is to be addressed under this Corrective Action section of the Post-Closure Permit.

2. For any new SWMU, not previously known to DTSC or identified as needing investigation or corrective action, Boeing-Rocketdyne shall perform items a.-e. above, following the attached Scopes of Work, as outlined below in F (Work to be Performed).

C. DEFINITIONS

The following definitions and others that may apply to this Part of the Permit shall be consistent with 22 CCR 66260.10 and H&SC Section 25110:

"Action Levels" means health-based and environmental-based levels determined by U.S. EPA to be indicators for protection of human health and/or the environment. Contamination exceeding action levels indicates a potential threat to human health and/or the environment which may require further study. Action levels are also used as a reference point for developing final cleanup standards.

"Day" means a calendar day. Periods of time are calculated by excluding the first day and including the last. Except, if the last day is a Saturday, Sunday or other holiday specified in Government Code section 6700 it is also excluded.

"Facility" means all contiguous property under the control of the owner or operator seeking a permit under Title 22, Division 4.5 of the California Code of Regulations. This definition also applies to facilities implementing corrective action under Health and Safety Code section 25187 or federal RCRA Section 3008(h) [U.S.C. Title 42, Section 6928(h)].

"Hazardous Constituent" means a constituent identified in Appendix VIII to Chapter 11, Division 4.5, Title 22, CCR; or any other element, chemical compound, or mixture of compounds which is a component of a hazardous waste or leachate and which has a physical or chemical property that causes the waste or leachate to be identified as a hazardous waste.

"Hazardous Waste" means a hazardous waste as defined in 22 CCR 66261.3. Hazardous waste includes extremely hazardous waste, acutely hazardous waste, RCRA hazardous waste, non-RCRA hazardous waste, and special waste.

"Release" means any spilling, leaking, pumping, pouring, emitting, emptying, discharging, injecting, escaping, leaching, dumping, or disposing into the environment. Release does not include items described in 22 CCR 66260.10, Definition for "Release", Subsections (b)(1-3).

"Solid Waste Management Unit" or **"SWMU"** means any unit at a hazardous waste facility from which hazardous constituents might migrate, irrespective of whether the units were intended for the management of wastes, including but not limited to: containers, tanks, surface impoundments, waste piles, land treatment units, landfills, incinerators and underground injection wells.

"Waste" means waste as defined in 22 CCR 66261.2.

D. SUMMARY OF CORRECTIVE ACTION

1. The RCRA Facility Assessment (RFA) for the SSFL was conducted by DTSC and the United States Environmental Protection Agency (U.S. EPA) in 1990 and a preliminary RFA report was prepared for the U.S. EPA by EPA's contractor in 1991 (SAIC, July 1991). A final RCRA Facility Assessment Report for Rockwell International Corporation was issued in 1994 (SAIC, May 1994). From the final results of the Preliminary Review (PR) and the Visual Site Inspection (VSI), the 1994 RFA Report accounts for a total of 69 Solid Waste Management Units (SWMUs) and 55 Areas of Concern (AOCs) in Areas I, II, III, IV, and the Buffer Zone.

2. In November 1992, Rockwell entered into a Stipulated Enforcement Order with the DTSC for RCRA Corrective Action activities at the entire SSFL pursuant to the California Health and Safety Code section 25187. This Permit does not terminate, alter, or amend any obligations in that Order.

   The Enforcement Order required Rockwell to perform the following:

   a. Address all SWMUs and AOCs identified in the RFA.

   b. Prepare a Current Condition Report on the SWMUs and AOCs.

   c. Prepare a draft RFI Workplan.

   The Order also contemplated a RCRA Facility Investigation (RFI) Report, Corrective Measures Studies, and final cleanup of the areas identified in the final approved Corrective Measure Studies.

3. In October 1993, the following documents were submitted in response to the Enforcement Order:

   a. Santa Susana Field Laboratory - Area I and III Current Conditions Report and draft RFI Work Plan.

   b. Santa Susana Field Laboratory - Area II Current Conditions Report and draft RFI Work Plan.

   c. Santa Susana Field Laboratory - Area IV Current Conditions Report and draft RFI Work Plan.

   d. Santa Susana Field Laboratory Pre-Investigation Evaluation of Corrective Measure Technologies - Areas I - IV.

4. In June 1994, DTSC conditionally approved the RFI Workplan.

5. Table 8 contains a list of the Solid Waste Management Units (SWMUs) identified at the facility in the May 1994 Final RCRA Facility Assessment:

TABLE 9
SOLID WASTE MANAGEMENT UNITS
AREAS I, II, III, IV and BUFFER ZONE

SWMU No.	DESCRIPTION
	4.0 AREA I
4.1	Old B-1 Area
4.2	Old Area I Landfill
4.3	Building 324 Instrument Lab Hazardous Waste Tank
4.4	Building 301 Equipment Laboratory TCA Distillation Unit and Used Product Tank
4.5	LOX Plant Waste Oil Sump and Clarifier
4.6	Asbestos and Drum Landfill Near LOX Plant
4.7	Component Test Laboratory (CTL-III)
4.8	Burn Pit
4.9	Advanced Propulsion Test Facility
4.10	Advanced Propulsion Test Facility Pond #1 (APTF-1)
4.11	Advanced Propulsion Test Facility Pond # 2 (APTF-2)
4.12	Laser Engineering Test Facility (LETF) Area
4.13	Laser Engineering Test Facility (LEFT) Pond
4.14	Canyon Retention Pond, Canyon Skim Pond, and Canyon Test Area
4.15	Bowl Retention Pond, Bowl Skim Pond, and Bowl Test Stands
4.16	Area I Reservoir (R-1)
4.17	Perimeter Pond
4.18	Air Stripping Towers (Canyon Alfa and Bowl) for Groundwater Treatment
4.19	Areas of Concern - Area I
	5.0 AREA II
5.1	Area II Landfill
5.2	Building 206 - ELV Final Assembly
5.3	Building 231 PCB Storage Facility
5.4	Swimming Pool UV/H_2O_2 Treatment System
5.5	Building 204 Plant Service Waste Oil Tank
5.6	Area II Incinerator Ash Pile

SWMU No.	DESCRIPTION
5.7	Hazardous Waste Storage Area (HWSA) Waste Coolant Tank
5.8	Hazardous Waste Storage Area (HWSA) Container Storage Area
5.9	Alfa Test Area
5.10	Alfa Test Area Tanks
5.11	Alfa Skim Pond and Alfa Retention Pond and Associated Drainages
5.12	Alfa-Bravo Skim Pond (ABSP)
5.13	Bravo Test Area
5.14	Bravo Test Stand Waste Tank
5.15	Bravo Skim Pond and Associated Drainages
5.16	Storable Propellant Area Pond 1 (SPA-1) and Associated Drainages
5.17	Storable Propellant Area Pond 2 (SPA-2) and Associated Drainages
5.18	Coca Test Area
5.19	Coca Skim Pond and Associated Drainages
5.20	Propellant Load Facility (PLF) Waste Tank
5.21	Propellant Load Facility (PLF) Ozonator Tank
5.22	Propellant Load Facility (PLF) Surface Impoundment
5.23	Delta Test Area
5.24	Delta Skim Pond and Associated Drainages
5.25	Purge Waste Tank near Delta Treatment System
5.26	R-2A and R-2B Discharge Ponds and Associated Drainages
5.27	Air Stripping Towers for Groundwater Treatment
5.28	Areas of Concern - Area II
6.0 AREA III	
6.1	Building 260 ECL Waste Tank, Building, and Associated Container Storage Area
6.2	ECL and Suspect Water Ponds
6.3	ECL Collection Tank
6.4	Building 418 Compound A Facility
6.5	Systems Test Laboratory IV (STL-IV) Test Area Including MMH Ozonator Tank
6.6	Systems Test Laboratory IV Pond #1 (STL-IV-1) and Associated Drainages

SWMU No.	DESCRIPTION
6.7	Systems Test Laboratory IV Pond #2 (STL-IV-2) and Associated Drainages
6.8	Silvernale Reservoir and Associated Drainages
6.9	Building 227, 224, Environmental Effects Lab
6.10	STL-VI Groundwater Treatment System
6.11	Areas of Concern - Area III
7.0 AREA IV	
7.1	Building 056 Landfill
7.2	Building 133 Sodium Burn Facility
7.3	Building 886 Former Sodium Disposal Facility
7.4	Container Storage Area (Old Conservation Yard)
7.5	Building 100 Trench
7.6	Radioactive Materials Disposal Facility (RMDF)
7.7	Rockwell International Hot Laboratory (RIHL) (Building 20)
7.8	New Conservation Yard
7.9	ESADA Chemical Storage Yard
7.10	Building 05 Coal Gasification
7.11	Building 29 Reactive Metal Storage Yard
7.12	Areas of Concern - Area IV
BUFFER ZONE	
	Discharge Point 001
	Discharge Point 002

6. Areas of Concern (AOC).

During the evaluation of Rockwell International's waste management and release data, a number of areas were identified as Potential SWMUs and/or Areas of Concern. These areas or units includes:

Area I:

Happy Valley
Leachfields for Area I
APTF Aboveground Storage Tanks
Storage Underground Tanks

Area II:

Leach fields for Area II
Building 207 Underground Diesel Tank
Underground Tank Across From Alfa-Bravo Fuel Farm Area
Building 206 Metal Diesel Tank
Building 204 Two Metal Underground Gasoline Tanks at Plant Services
Alfa-Bravo Fuel Farm Storm Water Basin
Storable Propellant Area (SPA)
Drainage Pipes Under Alfa-Bravo Skim Pond
Building 515 Sewage Treatment Plant

Area III:

Leachfields for Area III
Building 206 ECL Run-off Tanks
Area III Sewage Treatment Plant

7. Discussions of any releases and potential releases from the above units are included in the RFA Report, the Current Conditions Report and the draft RFI Workplan referenced above.

E. PROJECT COORDINATOR

1. Within 30 days of the effective date of this Permit, the Owner and/or Operator shall designate a Project Coordinator and shall notify the Department in writing of the Project Coordinator it has selected. The Owner and/or Operator's Project Coordinator shall be responsible for overseeing the implementation of corrective action at the Facility in accordance with this Part of the Permit and for designating a person to action in his/her absence. The Department will also designate a Project Coordinator. All communications between the Owner and/or Operator and the Department, and all documents, reports, approvals and other correspondence concerning the activities performed pursuant to this Part of the Permit shall be directed through the Project Coordinators.

2. The Owner and/or Operator will provide at least seven (7) days written notice to the Department prior to changing Project Coordinator.

3. The absence of the Department Project Coordinator from the Facility shall not be cause for the stoppage of work.

F. WORK TO BE PERFORMED

The Owner and/or Operator shall continue interim measures and corrective action for groundwater contamination as required in Section V of this permit.

The Owner and/or Operator shall perform the work specified in this Part of the Permit in the manner and by the dates specified herein. All work undertaken pursuant to this Part of the Permit shall be performed in a manner consistent with, at a minimum: the attached Scopes of Work; the Department-approved Interim Measures Workplan, the RCRA Facility Investigation Workplan, if required, Corrective Measures Study Workplan, and any other Department approved Workplans; and applicable State law and implementing regulations. All attachments to this Permit are incorporated by reference as if fully set forth herein.

The Owner and/or Operator shall complete the tasks required by this Part of the Permit in accordance with the approved schedules of compliance. Schedules of compliance may provide for implementation of tasks beyond the termination date of this Permit. All corrective action shall continue until the media cleanup standards are achieved and all required work has been completed.

1. Interim Measures (IM)

   a. The Owner and/or Operator shall evaluate available data and assess the need for interim measures in addition to those specifically required by this Part of the Permit. The interim measures assessment shall be incorporated into the Current Conditions Report portion of the RCRA Facility Investigation. Interim measures shall be used whenever possible to achieve the goal of stabilization which is to control or abate immediate threats to human health and/or the environment, and to prevent or minimize the spread of contaminants while long-term corrective action alternatives are being evaluated.

   b. All IM Workplans which may be required in the future shall ensure that the interim measures are designed to mitigate current or potential threat(s) to human health and/or the environment, and should, to the extent practicable, be consistent with the objectives of, and contribute to the performance of any future remedy which may be required at the Facility.

   c. Concurrent with the submission of an IM Workplan, the Owner and/or Operator shall submit to the Department a Health and Safety Plan. The Health and Safety Plan shall be developed in accordance with the Scope of Work for a Health and Safety Plan, Attachment F of this Permit.

   d. Concurrent with the submission of an IM Workplan, the Owner and/or Operator shall submit to the Department a Public Involvement Plan. The Public Involvement Plan must be developed in accordance with Attachment G of this Permit.

2. Potential or Immediate Threats/Newly Identified Releases/Newly Identified SWMUs

   a. In the event the Owner and/or Operator identifies an immediate or potential threat to human health and/or the environment, discovers new releases of hazardous waste and/or hazardous constituents, or discovers new SWMUs not previously identified, the Owner and/or Operator shall notify the Department orally within 48 hours of discovery and notify the Department in writing within 30 days of such discovery summarizing the findings including the immediacy and magnitude of any potential threat(s) to human health and/or the environment.

   b. The Department may require the Owner and/or Operator to investigate, mitigate and/or take other applicable action to address any immediate or potential threats to human health and/or the environment, newly identified releases of hazardous waste and/or hazardous constituents, or newly identified SWMUs. Upon written request by the Department, the Owner and/or Operator shall submit to the Department any required documents which may include, but are not limited to, IM Workplans and/or RCRA Facility Investigation Workplans. The required documents shall be developed in a manner consistent with the applicable Scope of Work appended to this Permit or with other guidance to be provided by the Department. The Department will review the required documents and notify the Owner and/or Operator in writing of the Department's approval or disapproval, including any comments and/or modification, in accordance with the Department Approval/Reporting/Proposed Contractor/Additional Work section of this Part of the Permit. If the Department determines

that immediate action is required, the Department's Project Coordinator may orally authorize the Owner and/or Operator to act prior to the Department's receipt or approval of any required workplans.

3. RCRA Facility Investigation (RFI)

a. In accordance with section VII.F.2.b, the Department may require the Owner and/or Operator to submit to the Department a Current Conditions Report and/or a Workplan for a RCRA Facility Investigation ("RFI Workplan") within 90 days of such request. The Current Conditions Report and RFI Workplan shall be developed in a manner consistent with the Scope of Work for a RCRA Facility Investigation contained in Attachment D. The Department will review the Current Conditions Report and RFI Workplan and notify the Owner and/or Operator in writing of the Department's approval or disapproval, including any comments and/or modifications, in accordance with the Department Approval/Reporting/ Proposed Contractor/Additional Work section of this Part of the Permit.

b. The RFI Workplan shall detail the methodology to:

(1). gather data needed to make decisions on interim measures/stabilization during the early phases of the RCRA Facility Investigation;

(2). identify and characterize all sources of contamination;

(3). define the nature, degree and extent of contamination;

(4). characterize the potential pathways of contaminant migration;

(5). define the rate of movement and direction of contaminant flow

(6). identify actual or potential human and/or ecological receptors; and

(7). support development of alternative remedial approaches or methods from which a corrective measure will be selected by the Department.

A specific schedule for implementation of all activities shall be included in the RFI Workplan (e.g., submittal of phase 2 workplan, submittal of RFI Reports, etc.).

c. The Owner and/or Operator shall submit a RFI Report to the Department in accordance with the schedule contained in the approved RFI Workplan. The RFI Report shall be developed in a manner consistent with the Scope of Work for a RCRA Facility Investigation contained in Attachment D. If there is a phased investigation, separate RFI Reports for each phase and a summary report that summarizes the findings from all phases of the RFI must be submitted to the Department. The Department will review the RFI Report(s) and notify the Owner and/or Operator in writing of the Department's approval or disapproval, including any comments and/or modifications, in accordance with the Department Approval/Reporting/Proposed Contractor/Additional Work section of this Part of the Permit.

d. Concurrent with the submission of a RFI Workplan, the Owner and/or Operator shall submit to the department a Health and Safety Plan in accordance with Attachment F of this Permit. If Workplans for both interim measures and RFI are required by this Part of the Permit, the Owner and/or Operator may submit a single Health and Safety Plan that addresses the combined IM and RFI activities.

e. The Owner and/or Operator shall submit a RFI Summary Fact Sheet to the Department that summarizes the findings from all phases of the RFI. The RFI Summary Fact Sheet shall be submitted to the Department in accordance with the schedule contained in the approved RFI Workplan. The Department will review the RFI Summary Fact Sheet and notify the Owner and/or Operator in writing of the Department's approval or disapproval, including any comments and/or modifications, in accordance with the Department Approval/Reporting/Proposed Contractor/Additional Work section of this Part of the Permit. When the Department approves the RFI Summary Fact Sheet, the Owner and/or Operator shall mail the approved RFI Summary Fact Sheet to all individuals on the facility mailing list established pursuant to 22 CCR 66271.9(c)(1)(D), within 15 calendar days of receipt of written approval.

f. Concurrent with the submission of a RFI Workplan, the Owner and/or Operator shall submit to the Department a Public Involvement Plan. The Public Involvement Plan shall be developed in accordance with Attachment G of this Permit. Any Public Involvement Plan developed for Interim Measures may be revised to include RFI activities.

4. Corrective Measures Study (CMS)

a. The Department will require a Corrective Measures Study if contaminant concentrations exceed current health-based action levels and/or if the Department determines that the contaminant releases pose a potential threat to human health and/or the environment.

b. Within 90 days after the Owner and/or Operator receives a written request from the Department, the Owner and/or Operator shall submit a CMS Workplan to the Department. The CMS Workplan shall be developed in a manner consistent with the Scope of Work for a Corrective Measures Study contained in Attachment E to this Permit. The Department will review the CMS Workplan and notify the Owner and/or Operator in writing of the Department's approval or disapproval, including any comments and/or modifications, in accordance with the Department Approval/Reporting/ Proposed Contractor/Additional Work section of this Part of the Permit.

c. The CMS Workplan shall detail the methodology for developing and evaluating potential corrective measures to remedy any contamination at the Facility. The CMS Workplan shall identify the potential corrective measures, including any innovative technologies, that may be used for the containment, treatment, remediation, and/or disposal of contamination.

d. The Owner and/or Operator shall conduct treatability studies for all potential corrective measures that involve treatment except where the Owner and/or Operator can demonstrate to the Department's satisfaction that they are not needed. The CMS Workplan shall include, at a minimum, a summary of the proposed treatability study including a conceptual design, treatability study including a conceptual design, a schedule for submitting a treatability study workplan, or the Owner and/or Operator's justification for not proposing a treatability study.

e. The Owner and/or Operator shall submit a CMS Report to the Department in accordance with the schedule contained in the approved CMS Workplan. The CMS Report shall be developed in a manner consistent with the Scope of Work for a Corrective Measures Study contained in Attachment E to this Permit. The Department will review the CMS Report and notify the Owner and/or Operator in writing of the Department's approval or disapproval, including any comments and/or modifications, in accordance with the Department Approval/Reporting/Proposed Contractor/Additional Work section of this Part of the Permit.

5. California Environmental Quality Act

The Department must comply with the California Environmental Quality Act (CEQA) insofar as activities required by this Permit may be projects requiring CEQA compliance. The Department will prepare a Notice of Exemption or an Initial Study as required by CEQA. Based on the results of an Initial Study, the Department will determine if a Negative Declaration or Environmental Impact Report (EIR) should be prepared. The Department will prepare and process any such Negative Declarations. However, should the Initial Study indicate that an EIR is necessary, such an EIR would be prepared under separate agreement between the Department and the Owner and/or Operator.

6. Corrective Measures Implementation (CMI)

a. The Department will evaluate corrective measure alternatives presented in the approved CMS Report. Based on the evaluation, the Department may propose a corrective measure (or measures) for implementation at the Facility. The proposed corrective measures(s) must:

(1). be protective of human health and/or the environment;

(2). meet the media cleanup standards;

(3). control the source(s) of releases(s) so as to reduce or eliminate, to the maximum extent practicable, further releases that might pose a threat to human health and/or the environment; and

(4). meet all applicable waste management requirements.

b. The Department may modify this Permit to require the Owner and/or Operator to implement the proposed corrective measure(s). The permit modification will be done in accordance with the requirements contained in 22 CCR 66270.41. As a part of the permit modification process, the public will have an opportunity to review and comment on a draft of the modified permit, the Department's proposed corrective measure(s) for the Facility, and the Department's justification for selection of such corrective measure(s) (the "Statement of Basis").

c. Following the public comment period, the Department will prepare a formal response to all public comments received regarding the Permit modification ("Response to Comments"). The Department may, as a result of the public comments, issue the final modified permit, require the Owner and/or Operator to do additional work, or select an alternative corrective measure for implementation at the Facility.

d. Nothing in this Permit shall limit the Department's authority to implement the selected corrective measure(s) or to take any other appropriate action under the laws and regulations of the State of California, or any other legal authority, including the filing of a civil action seeking a judicial order directing the Owner and/or Operator to implement the selected corrective measure(s).

e. The Department will review all required CMI documents and notify the Permittee in writing of the Department's approval or disapproval, including any comments and/or modifications, in accordance with the Department Approval/Reporting/Proposed Contractor/Additional Work section of this Part of the Permit.

f. Nothing in this Permit shall limit the Department's authority to implement a selected corrective measure(s) or to take any other appropriate action under the laws and regulations of the State of California, or any other legal authority, including the filing of a civil action seeking a judicial order directing the Owner and/or Operator to implement a selected corrective measure(s).

G. DEPARTMENT APPROVAL/REPORTING/PROPOSED CONTRACTOR/ADDITIONAL WORK

1. Department Approval

a. The Department will provide the Owner and/or Operator with its written approval, approval with conditions and/or modifications, disapproval, or disapproval with comments for any workplan, report (except progress reports), specification or schedule submitted pursuant to or required by this Permit.

b. The Owner and/or Operator shall revise any workplan, report, specification or schedule in accordance with the Department's written comments. The Owner and/or Operator shall submit to the Department any revised submittals in accordance with a due date specified by the Department. Revised submittals are subject to Department approval or disapproval, with comments and/or modification.

c. Upon receipt of the Department's written approval, the Owner and/or Operator shall commence work and implement any approved workplan or plan in accordance with the schedule and provisions contained therein.

d. Any Department approved workplan, report, specification, or schedule, shall be deemed incorporated into this Permit. Any non-compliance with such approved workplans, reports, specifications or schedules shall be considered non-compliance with this Permit. Prior to this written approval, no workplan, report, specification or schedule shall be construed as approved and final. Verbal advice, suggestions, or comments given by the Department representatives will not constitute an official approval, nor shall any verbal approval or verbal assurance be considered binding.

2. Reporting

a. Beginning 90 days following the effective date of this Permit, until suspended by the Department in writing, the Owner and/or Operator shall provide the Department with quarterly progress reports of corrective action activities conducted and to be conducted pursuant to this Part of the Permit. Progress reports are due on the 15th day of the month when reports are due. The progress reports shall conform to the requirements contained in Attachment I to this Permit. The Department may adjust the frequency of progress reporting to be consistent with site-specific activities.

b. Any report or other document submitted by the Owner and/or Operator pursuant to this Part of the Permit shall be signed and certified by a responsible corporate officer of the Owner and/or Operator or a duly authorized representative in accordance with 22 CCR 66270.11.

c. Three copies of all documents, including but not limited to, workplan(s), reports, and other correspondence to be submitted pursuant to this Part of the Permit shall be hand delivered, sent by certified mail, return receipt requested, or by overnight express mail to the Department Project Coordinator or to other addresses she/he designates. Submittals specifically exempted from the three copy requirement outlined above are all progress reports, and any other correspondence of less than 15 pages, of which one copy is required. All submittals required by this Permit shall be printed on recycled paper and shall be copied double-sided whenever practicable.

d. Unless otherwise specified, all reports, correspondence, approvals, disapprovals, notices or other submissions relating to or required under this Part of the Permit shall be in writing and shall be sent to the respective Project Coordinators.

e. The Owner and/or Operator shall submit to the Department upon request the results of all sampling and/or tests or other data generated pursuant to this Part of the Permit.

3. Proposed Contractor/Consultant

All work performed pursuant to this Part of the Permit shall be under the direction and supervision of a California registered professional engineer, hydrologist, or geologist with expertise in hazardous waste site cleanup. The Owner and/or Operator's contractor or consultant shall have the technical expertise sufficient to adequately perform all aspects of the work for which they are responsible. Within 60 days of the effective date of this Permit, the Owner and/or Operator shall notify the Department Project Coordinator in writing of the name, title, and qualifications of the engineer or geologist, and of any contractors or consultants and their personnel to be used in carrying out this Part of the Permit.

4. Additional Work

The Department may determine or the Owner and/or Operator may propose that certain tasks, including investigatory work, remedial action, engineering evaluation, or procedure/methodology modification are necessary in addition to, or in lieu of, the tasks and deliverables included in any workplan approved by the Department. The Department shall request in writing that the Owner and/or Operator perform the additional work and shall specify the basis and reasons for the Department's determination that the additional work is necessary. Within 14 days after the receipt of such determination, the Owner and/or Operator shall have the opportunity to meet or confer with the

Department to discuss the additional work the Department has requested. If required by the Department, the Owner and/or Operator shall submit a workplan to the Department for additional work. Such workplan shall be submitted to the Department according to a schedule established by the Department. Upon approval of a workplan, the Owner and/or Operator shall implement it in accordance with the provisions and schedule contained therein.

H. QUALITY ASSURANCE

1. Workplans shall contain quality assurance/quality control and chain of custody procedures for all sampling, monitoring and analytical activities.

2. The name(s), address and telephone numbers of the California State certified analytical laboratories the Owner and/or Operator proposes to use must be specified in the applicable workplan(s).

3. All workplans required under this Part of the Permit shall include data quality objectives for each data collection activity to ensure that data of known and appropriate quality are obtained and that data are sufficient to support their intended use(s).

4. The Owner and/or Operator shall ensure that data of appropriate quality are obtained by its consultant or contract laboratories. The Owner and/or Operator shall ensure that California State Certified laboratories used by the Owner and/or Operator have in place a quality assurance program plan and perform analyses according to the latest approved edition of "Test Methods for Evaluating Solid Waste, (SW-846)", or other methods deemed satisfactory by the Department. If methods other than standard methods are to be used, the Owner and/or Operator shall specify all such methods in the applicable workplan (e.g, RFI workplan). The Department may reject any data that does not meet the requirements of the approved workplan or the analytical methods, and may require resampling and analysis.

5. The Department may conduct a performance and quality assurance/quality control audit of the laboratories chosen by the Owner and/or Operator before, during or after sample analyses. Upon request by the Department, the Owner and/or Operator shall have its selected California State certified laboratory perform analyses of samples provided by the Department to demonstrate laboratory performance. If the audit reveals deficiencies in a laboratory's performance or quality assurance/quality control, resampling and analysis may be required.

I. SAMPLING/ACCESS

1. Sampling

   a. The Owner and/or Operator shall notify the Department in writing at least 14 days prior to beginning each separate phase of field work approved under any workplan required by this Part of the Permit. If the Owner and/or Operator believes it must commence emergency field activities without delay, the Owner and/or Operator may seek emergency telephone authorization from the Department Project Coordinator or, if the Project Coordinator is unavailable, his/her immediate supervisor, to commence such activities immediately. At the request of the Department, the Owner and/or Operator shall provide or allow the Department or its authorized representative to take split or duplicate samples of all samples collected by the Owner and/or Operator pursuant to this Part of the Permit.

b. The Owner and/or Operator shall submit to the Department upon request the results of all sampling and/or tests or other data generated by it's employees, divisions, agents, consultants or contractors pursuant to this permit.

c. Notwithstanding any other provisions of this Permit, the Department retains all of it's information gathering and inspection authority and rights including enforcement actions related thereto, under H&SC and any other applicable state or federal statutes or regulations.

2. Access

a. In accordance with Permit condition II.D, the Department, its contractors, employees, and/or any U.S. EPA representatives are authorized to enter and freely move about the Facility pursuant to this Part of the Permit for the purposes of: interviewing Facility personnel and contractors; inspecting records, operating logs, and contracts related to the Facility; reviewing the progress of the Owner and/or Operator in carrying out the terms of this Part of the Permit; conducting such tests, sampling or monitoring as the Department or its Project Coordinator deems necessary; using a camera, sound recording, or other documentary type equipment; and verifying the reports and data submitted to the Department by the Owner and/or Operator. The Owner and/or Operator shall provide the Department and its representatives access at all reasonable times to the Facility and any other property to which access is required for implementation of this Part of the Permit and shall permit such persons to inspect and copy all records, files, photographs, documents, including all sampling and monitoring data, that pertain to work undertaken pursuant to this Part of the Permit.

b. To the extent that work being performed pursuant to this Part of the Permit must be done on property not owned or controlled by the Owner and/or Operator, the Owner and/or Operator shall use its best efforts to obtain access agreements necessary to complete work required by this Part of the Permit from the present owner(s) of such property within 30 days of approval of any workplan for which access is required. Best efforts as used in this paragraph shall include, at a minimum, a certified letter from the Owner and/or Operator to the present owner(s) of such property requesting access agreement(s) to allow the Owner and/or Operator and the Department and its authorized representatives access to such property and the payment of reasonable sums of money in consideration of granting access. The Owner and/or Operator shall provide the Department Project Coordinator with a copy of any access agreement(s). In the event that agreements for access are not obtained within 30 days of approval of any workplan for which access is required, or of the date that the need for access become known to the Owner and/or Operator, the Owner and/or Operator shall notify the Department in writing within fourteen (14) days thereafter regarding both the efforts undertaken to obtain access and its failure to obtain such agreements. In the event the Department obtains access, the Owner and/or Operator shall undertake approved work on such property.

c. Nothing in this Part of the Permit shall be construed to limit or otherwise affect the Owner and/or Operator's liability and obligation to perform corrective action including correction action beyond the Facility boundary, notwithstanding the lack of access. The Department may determine that additional on-site measures must be taken to address releases beyond the Facility boundary if access to off-site areas cannot be obtained.

d. Nothing in this section limits or otherwise affects the Department's right of access and entry pursuant to any applicable state or federal laws and regulations.

J. RECORD PRESERVATION

1. The Owner and/or Operator shall retain, during the term of this Permit, all data, records and documents gathered or generated during activities undertaken pursuant to this Part of the Permit. All such documents shall be stored in a centralized location at the SSFL (or other location approved by the Department) and be made available to the Department or its representatives upon request. The Owner and/or Operator shall notify the Department in writing at least 90 days prior to final expiration of this Permit, and shall provide the Department with the opportunity to take possession of any such records. Such written notification shall reference this Permit (including expiration date) and shall be addressed to the Department Project Coordinator.

2. The Owner and/or Operator shall obtain copies of all data, records and documents gathered or generated by any agent, consultant, or contractor employed by the Owner and/or Operator to carry out the terms of this Part of the Permit.

K. DISPUTE RESOLUTION

1. The Department and the Owner and/or Operator shall use their best efforts to informally and in good faith resolve all disputes or differences of opinion.

2. If the Owner and/or Operator disagrees, in whole or in part, with any written decision by the Department relating to Department modification of interim deliverables submitted by the Owner and/or Operator or to additional work required by the Department pursuant to this Part of the Permit, the Owner and/or Operator Project Coordinator shall orally notify the Department Project Coordinator of the dispute. The Project Coordinators shall attempt to resolve the dispute informally.

3. If the Project Coordinators cannot resolve the dispute informally, the Owner and/or Operator may pursue the matter formally by placing its objections in writing. The Owner and/or Operator's written objections must be directed to the Permitting Branch Chief, with a copy to the Department Project Coordinator, within 14 days of the Owner and/or Operator's receipt of the Department decision. The Owner and/or Operator's written objection must set forth the specific points of the dispute and the basis for the Owner and/or Operator's position.

4. The Department and the Owner and/or Operator shall have 14 days from the Department's receipt of the Owner and/or Operator's written objections to attempt to resolve the dispute through formal discussions. This time period may be extended by the Department for good cause. During such time period, the Owner and/or Operator will have an opportunity to meet or confer with the Department to discuss the dispute and the Owner and/or Operator's objections.

5. After the formal discussion period, the Department will provide the Owner and/or Operator with its written decision on the dispute. The Department's written decision will reflect any agreements reached during the formal discussion period and be signed by Permitting Branch Chief. The decision shall be incorporated into and become an enforceable part of this Permit. The decision is not subject to further dispute resolution.

6. If the Owner and/or Operator fails to follow any of the requirements contained in this Part of the Permit then it shall have waived its right to further consideration of the disputed issue.

7. The existence of a dispute as defined herein, and the Department's consideration of such matters as placed into dispute shall not excuse, toll or suspend any compliance obligation or deadline required pursuant to this Part of the Permit during the pendency of the dispute resolution process.

L. MODIFICATION

1. The Owner and/or Operator must request a permit modification to revise any submittal dates specified in this Part of the Permit. To request such a revision, the Owner and/or Operator must use the procedures for a Class 1 permit modification with prior Department approval in accordance with 22 CCR 66270.42. Such requests must be timely and provide justification for any proposed submittal date revisions.

2. If at any time the Department determines that modification of this Part of the Permit is necessary, the Department may initiate a modification to this Part of the Permit according to the procedures in 22 CCR 66270.41.

3. Any requests for a revision of an approved workplan (or plan) requirement must be in writing. Such requests must be timely and provide justification for any proposed workplan revision. The Department has no obligation to approve such requests, but if it does so, such approval will be in writing and signed by the Permitting Branch Chief. Any approved workplan modification shall be incorporated by reference into this Permit.

M. FACILITY SUBMITTAL SUMMARY

Below is a summary of the major reporting requirements contained in this Part of the Permit. The summary is provided as a general guide and thus does not contain all requirements. Please refer to the specific language of this Part of the Permit for all the requirements.

Facility Submission Requirements	Due Date
Designate Project Coordinator and notify the Department in writing	30 days from effective date of Permit
Notify the Department in writing of contractors to carry out terms of Permit	60 days from effective date of Permit
Submit first Progress Report	45 days after the effective date of this Permit
Submit Progress Reports	quarterly, 15 days after the end of the reporting period
Notify the Department of when field work starts	14 days before each phase of field work
Submit CMS Workplan	90 days after Department request
Implement approved Workplans	In accordance with schedules contained in approved Workplans
Verbal notification of immediate or potential threats to human health or the environment, newly identified releases or newly discovered SWMUs	48 hours after discovery
Written notification of immediate or potential threats to human health or the environment, newly identified releases or newly discovered SWMUs	30 days after discovery

PART VIII

COMPLIANCE SCHEDULE

A. REPORTING REQUIREMENTS

The Owner and/or Operator shall submit reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of this Permit no later than fourteen (14) calendar days after each scheduled date. [22 CCR 66270.30(l)(5)]

B. SUMMARY OF COMPLIANCE SCHEDULE

In addition to the reporting requirements for a Corrective Action Program as specified in Permit Condition VII.G, the following documents shall be submitted to the Department by the dates shown:

Document	Due Date
Documentation of compliance with protective distance requirements as required by Permit Condition III.I.4	Within sixty (60) calendar days after the effective date of this Permit
Groundwater Sampling and Analysis Plan (SAP), including provisions for checking for free phase liquids, turbidity testing and reporting status of activated carbon canisters.	Within 30 calendar days after the effective date of this permit.
Document demonstrating adequate seals for groundwater wells as required in Permit section V.G.1.e.	1 year from the effective date of this permit.
Groundwater concentration limits	As part of the next Annual Groundwater Report, V.K due March 1996.
Submit a proposed replacement detection well or wells for RD52-B.	Within 60 days of the effective date of this permit.
Modify the Part A Permit Application to include spent carbon canisters holding hazardous waste constituents, reagent supply (peroxide) tanks and holding tanks.	Within sixty (60) days after the effective date of this permit.
Provide the ECL unit containment volume.	Within thirty (30) days after the effective date of this permit.